CITY OF MANCHESTER.

REPORT

ON THE

Health of the City of Manchester

FOR

1946,

BY

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HEALTH DEPARTMENT,
TOWN HALL,
MANCHESTER, 2,
12th August, 1947.

MY LORD MAYOR, ALDERMEN, AND MEMBERS OF THE COUNCIL,

I have pleasure in presenting my report on the health of the City for the year 1946.

The Registrar General's estimate of the population of the City is 668,660, an increase of 45,180 over the comparable estimate of 1945 and a decrease of 58,940 from the estimated population of 1939. The natural increase in the population (*i.e.*, the excess of births over deaths) in 1946 was 4,931.

During the year 14,912 persons were married in the City, giving a marriage rate of 22·30 per 1,000 of the population compared with 23·85 in 1945. In 1931 the rate was 16·05, which increased to 21·95 in 1939. In 1940 the rate reached 28·91.

Live births have increased from 11,362 (5,825 males and 5,537 females) in 1945, to 13,969 (7,142 males and 6,827 females) in 1946, representing a live birth rate of 20·89 per 1,000 of the population compared with 18·22 in 1945. Of the total live births 7,932, or 56·78 per cent., were born in hospitals in the City. The number of illegitimate births was 1,095, which is 7·84 per cent. of the total live births. The percentage for 1938 was 5·05.

The number of stillbirths registered during the year was 445 compared with 372 for 1945. The stillbirth rate was 30·8 per 1,000 births (live and still), which is 0·83 lower than that for 1945.

The number of deaths and the crude death rate was 9,038, or 13·52 per 1,000 of the population, as compared with the corresponding figures for 1945 of 8,985 and 14·41 respectively.

The deaths of infants under one year numbered 890 and the infant mortality rate was 63·71 as compared with 634 and 55·80 respectively for the previous year. The rate for England and Wales in 1946 was 43·0. During recent years the general trend of the Infant Mortality Rate in Manchester has been one of decline, but in 1946 the rate increased to 63·7 per 1,000 live births. The factors causing this increased rate would appear to have been active only after birth, as pre-natal influences would have tended to lead to an increased rate of stillbirths. Diarrhoea was the main cause of the increased Infant Mortality Rate. There was an outbreak of neonatal diarrhoea in the Maternity Unit of Withington Hospital during the last quarter of the year and also an epidemic of gastro-enteritis among older infants during the autumn. Another factor was an increase in the number of deaths among premature infants during 1946.

There were 474 deaths among infants under one month old equal to a rate of 33·93 per 1,000 live births. The main causes of death were due to congenital debility and malformation (including premature birth).

The maternal mortality rate was 1·60 per 1,000 total births compared with 1·02 for the previous year. The rate for England and Wales as a whole was 1·43. Of the 23 maternal deaths in the City, five were due to puerperal and post-abortive sepsis.

Deaths due to tuberculosis (both pulmonary and non-pulmonary) decreased from 577 (or 0·93 per 1,000 of the population) in 1945, to 527 (or 0·79 per 1,000 of the population) in 1946. The rate for pulmonary tuberculosis was 0·69 and non-pulmonary 0·10. The average annual rates for the past five years were 1·07 for all forms, 0·93 for pulmonary, and 0·14 for non-pulmonary. The rate for England and Wales for 1946 was 0·55 and represents pulmonary 0·46 and non-pulmonary 0·09. The shortage of both nursing and domestic staff is still denying to patients suffering from this disease the opportunity of early hospitalisation which gives the best chance of recovery.

Deaths from cancer were 1,285, equal to a rate of 1·92 as compared with 2·08 for the previous year. The average annual death rate for the past five years is 2·10, whilst the rate for England and Wales for 1946 was 1·84.

During the year a case of smallpox occurred in a soldier who returned to this country from Rangoon for demobilisation. He travelled to Manchester on demobilisation leave and as he was not feeling well decided to reside temporarily in Manchester, prior to travelling to his home in Monmouthshire. He was removed to hospital and died eight days after admission. All traceable contacts were vaccinated or re-vaccinated and kept under surveillance for an appropriate period. No further cases occurred.

The number of cases of diphtheria notified during the year was 259. This is a reduction of 43 on the number notified in 1945. There were 11 deaths as against 14 in the previous year. No deaths occurred in children who had been immunised. There were 11,342 children under 15 years of age who received a complete course of diphtheria prophylactic injections and 572 who received their first injection. The Mobile Unit continued to visit the areas in the City in which the percentage of immunised children was low, and was responsible for the complete immunisation of 4,234 children. At the present time the percentage of children under 15 years of age who have been immunised is 70·47, the percentage in age groups being 61·50 in 0 to 5 and 75·44 in 5 to 15 years.

During the year 2,265 notifications of whooping cough were received as compared with 1,835 for 1945. There were 32 deaths due to this disease in 1946 as against 25 in 1945.

28 notifications of typhoid and paratyphoid fever were received and in 18 of the cases the diagnosis was confirmed ; of these, 7 were infected with B.typhosus and 11 with B.paratyphosus. One death from typhoid occurred in a male, 22 years of age, who returned from the Middle East and was ill on arrival in this country. 2 other cases of typhoid occurred in females, 31 years and 6 years, who contracted the disease while on holiday in Aberystwyth.

The number of notifications of dysentery received was 226 of which 167 were confirmed as true cases as compared with 413 for 1945. 2 deaths occurred. Of the 167 cases, 135 proved to be associated with the presence of bacilli of the Sonne type.

The condition of much of the housing in the City continues to be unsatisfactory and the position generally tends to deteriorate. This deterioration will continue until such time as the necessary facilities become available to the Housing Department to provide new houses in reasonably sufficient numbers.

I desire to express my gratitude to the Chairman and members of the Health Committee and the officers of the various Departments of the Corporation, who have all collaborated, as in previous years, in caring for the public health of the City.

I have the honour to be,

My Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

CHARLES METCALFE BROWN,
Medical Officer of Health.

HEALTH COMMITTEE

1946—47.

Chairman—Councillor T. M. Larrad, J.P.

Deputy Chairman—Councillor J. McGrath.

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,, Elizabeth Cruse
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HEALTH OFFICERS.

(A) Medical, etc., General Administration.

C. Metcalfe Brown, M.D., D.P.H., Barrister-at-Law	Medical Officer of Health.
A. M. M. Grierson, O.B.E., M.D., D.P.H., F.R.S. (ED.)	Deputy Medical Officer of Health.
D. P. Sutherland, M.B., B.S. (LOND.)	Senior Tuberculosis Officer and Deputy Administrative Tuberculosis Officer.
Andrew B. Semple, M.D., D.P.H.	Senior Assistant Medical Officer of Health.
Margaret H. Mackillop, M.B., CH.B.	Assistant Medical Officer of Health (Maternity and Child Welfare).
James F. Swan, M.D., D.P.H., D.R.C.O.G.	Assistant Medical Officer of Health.
Andrew V. Magee, M.B., CH.B.	Assistant Medical Officer of Health (Whooping Cough Investigation—part-time).
Harri Heap, M.SC., F.R.I.C.	Public Analyst.
Frederick Dixon, B.SC., F.R.I.C.	Assistant Public Analyst.
Winifred M. L. Selmes, S.R.N., S.C.M., D.N. (LOND. UNIV.)	Nursing Organiser.

(B) Lay.

George Ogden, F.C.C.S.	Lay Administrative Officer.
George Plant	Deputy Lay Administrative Officer.

Senior Clerks.

Harold I. Bayford	General Administration.
Walter Hart	Infectious diseases and statistical.
Charles W. Wilkinson	Hospitals Administration.

General Administration, Infectious Diseases and Hospitals Administration	31 Clerks and Typists.
Vaccination	4 Officers.

GENERAL STATISTICS

The following are general statistics for the year 1946 :—

Area of the City in Acres			27,255
Census population for the year 1931	Males	360,976	766,378
	Females	405,402	
Estimated population for the year 1946 (Registrar General)	Males	314,947	668,660
	Females	353,713	
Rateable value (1st April, 1946)			£6,401,248
Sum represented by a penny rate (estimated)			£24,450
No. of persons per acre			25
Persons married per 1,000 of population			22·30

		Total	Males	Females	
Live Births	Legitimate	12,874	6,579	6,295	13,969
	Illegitimate	1,095	563	532	

Live-birth rate per 1,000 of population			20·89
Still-births	Males	244	445
	Females	201	
Still-births rate per 1,000 total (live and still) births			30·87
Deaths	Males	4,642	9,038
	Females	4,396	
Death rate per 1,000 of the estimated resident population	Males	14·74	13·52
	Females	12·43	
Excess of registered births over deaths			4,931
Percentage of mortality occurring in public institutions			46·11

Deaths from puerperal causes:—

	Deaths	Rate per 1,000 total (live and still) births	
Puerperal and post-abortive sepsis	5	0·35	1·60
Other puerperal causes	18	1·25	
Total	23		

Death Rate of infants under one year of age:—

All infants per 1,000 live births	63·71
Legitimate infants per 1,000 legitimate live births	61·98
Illegitimate infants per 1,000 illegitimate live births	84·02

No. of Occupied Structurally Separate Dwellings at the Census in April, 1931		177,430
No. of Inhabited Houses according to Rate Books		196,402
No. of persons per occupied Structurally Separate Dwelling (Census 1931)		4·32
No. of persons per house, 1946 (based on 197,859 houses connected with the water supply within the City)		3·38
No. of new houses erected during 1946:—		
By Local Authority (Houses 190, Flats 115, Temporary Bungalows 949)	1,254	
By other bodies or persons	49	
		1,303

The City of Manchester, with a population of 668,660 and an area of 27,255 acres, is the centre of one of the most densely populated industrial areas in Britain. It is an inland port with modern equipment dealing with more than three million tons of shipping per annum and is a main centre for distribution by road, rail, and sea.

A great industrial centre, Manchester is known throughout the world for its cotton industry, its heavy engineering and chemical industries.

Manchester being situated at the junction of three valleys leading from the Pennines and containing the rivers Irwell, Irk and Medlock, has a surface level varying from about 80 feet above sea level to the South, and 300 feet to the North. The solid geology is for the most part obscured by thick deposits of glacial drift (boulder-clay, sands, and gravels), which so generally overspread the neighbourhood. The underlying strata are triassic, permain, and carboniferous rocks, dipping westwards from the Pennine Chain to the plains of Cheshire.

Manchester is within easy reach of the breezy hills and high moorlands of the Pennine Chain on its eastern and northern sides, and the Derbyshire hills on the south-eastern side, which are plainly visible from the outskirts of the City.

METEOROLOGY, 1946.

Means of the Monthly Readings from Whitworth Observatory, Manchester.

	Wet Bulb	Dry Bulb	Mean Maximum Temperature	Mean Minimum Temperature	Mean Temperature	Total Rainfall (inches)	Total No. of Wet Days	Total Hours of Sunshine	No. of Days on which Fog was noted at 09·00 G.M.T.
January	36·5	38·1	43·1	33·9	38·5	4·145	19	24·50	2
February	40·0	41·0	46·8	38·7	42·8	5·269	20	52·60	1
March	38·8	41·4	49·3	35·8	42·5	0·784	11	101·10	5
April	46·4	49·7	58·5	42·9	50·7	1·284	9	128·40	0
May	47·2	51·6	60·9	43·5	52·2	1·063	10	221·30	0
June	52·3	56·0	63·0	48·7	55·9	2·920	22	139·50	0
July	56·6	61·1	69·1	54·3	61·7	4·530	17	154·70	0
August	54·7	58·0	65·4	52·0	58·7	4·240	21	130·10	0
September	54·4	57·1	63·6	52·0	57·8	4·680	21	88·80	0
October	47·1	49·9	55·3	46·1	50·7	0·630	11	71·92	1
November	45·4	47·3	51·5	42·4	47·0	5·000	23	21·90	1
December	36·0	38·1	43·4	33·7	38·6	3·030	22	17·67	9
YEAR ..	46·3	49·1	55·8	43·6	49·7	36·951	206	1148·08	19
	Means					Totals			

The Meteorological Station situated at the Corporation Cleansing Yard, 299, Oldham Road, which has been in operation since 1892, was dismantled in June, 1938. This was necessary on account of further accommodation being required for building purposes of the Cleansing Committee. After communication with the Air Ministry they considered that the records taken at the Meteorological Station connected with the Manchester University in Whitworth Park were sufficient for their purpose.

Birth Rate, Death Rate, and Analysis of Mortality, 1946, in England and Wales, Grouped Areas, London and Manchester.

	Birth Rate per 1,000 Total Population		Annual Death Rate per 1,000 Population								Rate per 1,000 Live Births	
	Live Births	Still Births	All Causes	Typhoid and Paratyphoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Diarrhoea and Enteritis (under two years)	Total Deaths (under one year)
England and Wales	19·1	0·53	11·5	0·00	0·00	0·00	0·00	0·02	0·01	0·15	4·4	43
126 County Boroughs and Great Towns, including London..	22·2	0·67	12·7	0·00	0·00	0·01	0·00	0·02	0·01	0·13	6·1	46
148 Smaller Towns, estimated Resident Population 25,000 to 50,000 at Census	21·3	0·59	11·7	0·00	0·00	0·00	0·00	0·02	0·01	0·14	2·8	37
London Administrative County	21·5	0·54	12·7	0·00	—	0·01	0·00	0·02	0·01	0·12	4·2	41
Manchester	20·9	0·67	13·5	0·00	—	0·00	—	0·05	0·02	0·16	12·1	64

A dash (—) signifies that there were no deaths.

CAUSES OF DEATH, 1946.

Registrar General's Return.

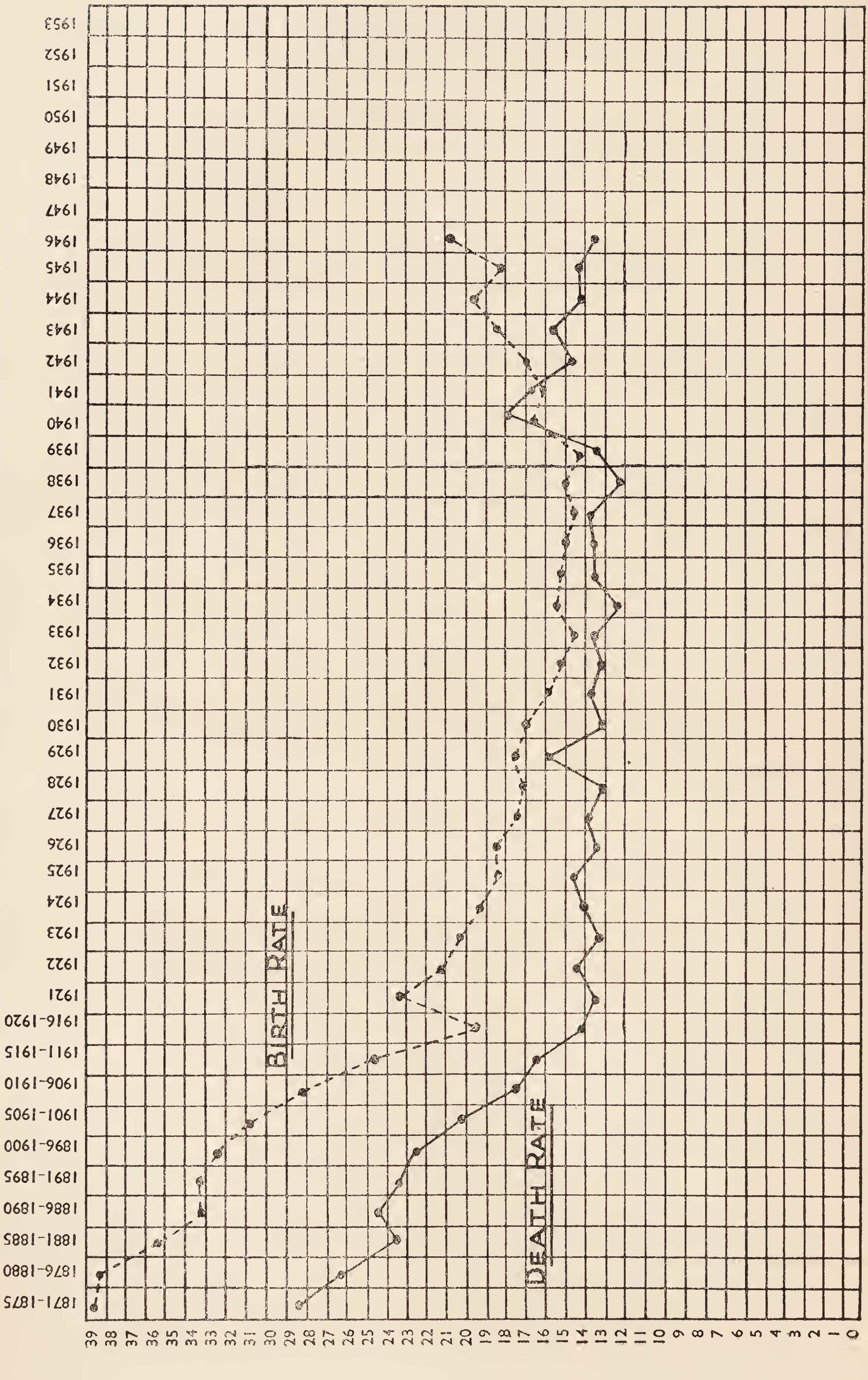
Manchester.

Causes of Death	Male	Female	Ages at Death						
			At All Ages	Under 1 Year	1 Year and Under 5 Years	5 Years and Under 15 Years	15 Years and Under 45 Years	45 Years and Under 65 Years	65 Years and Over
Typhoid and Paratyphoid Fevers..	1	—	1	—	—	—	1	—	—
Cerebro-Spinal Fever	4	6	10	4	3	—	3	—	—
Scarlet Fever	—	—	—	—	—	—	—	—	—
Whooping Cough	11	21	32	22	10	—	—	—	—
Diphtheria..	3	8	11	—	4	6	1	—	—
Tuberculosis of Respiratory System	290	170	460	3	- -	3	232	171	51
Other forms of Tuberculosis	26	41	67	9	14	10	22	11	1
Syphilitic Diseases	29	18	47	6	—	—	9	23	9
Influenza	46	59	105	3	2	1	16	22	61
Measles	2	1	3	2	1	—	—	—	—
Acute Poliomyelitis and Polioencephalitis	1	—	1	—	—	—	—	1	—
Acute Infectious Encephalitis . .	8	6	14	—	—	—	7	5	2
Cancer of Buccal Cavity and Oesophagus (M.), Uterus (F.) ..	62	70	132	—	—	—	9	53	70
Cancer of Stomach and Duodenum	124	103	227	—	—	--	11	96	120
Cancer of Breast	2	139	141	—	—	—	18	68	55
Cancer of All other Sites.. .. .	466	319	785	—	2	1	62	335	385
Diabetes	20	40	60	—	—	1	4	23	32
Intra-Cranial Vascular Lesions .	356	484	840	4	1	—	16	211	608
Heart Disease	889	993	1882	—	—	6	106	494	1276
Other Diseases of Circulatory System	181	196	377	—	—	—	10	87	280
Bronchitis	585	308	893	22	5	1	39	296	530
Pneumonia	228	171	399	125	16	2	30	80	146
Other Respiratory Diseases .. .	56	49	105	8	2	1	12	48	34
Ulcer of Stomach and Duodenum.	74	16	90	—	—	—	9	56	25
Diarrhœa (under 2 years) .. .	97	72	169	167	2	--	—	—	—
Appendicitis	12	8	20	—	—	1	8	7	4
Other Digestive Diseases .. .	76	95	171	8	1	2	23	49	88
Nephritis	86	125	211	1	2	2	26	77	103
Puerperal and Post-Abortive Sepsis	—	5	5	—	—	--	5	—	—
Other Maternal Causes	—	18	18	—	—	—	18	—	—
Premature Birth	121	71	192	192	—	—	—	—	—
Congenital Malformations, Birth Injuries, and Infantile Diseases	151	111	262	243	7	4	3	2	3
Suicide	36	18	54	—	—	—	16	20	18
Road Traffic Accidents	43	30	73	—	7	10	20	21	15
Other Violent Causes	101	63	164	25	11	16	34	30	48
All other Causes	455	562	1017	46	16	16	82	129	728
Totals.. ..	4642	4396	9038	890	106	83	852	2415	4692

A table showing the mortality rates due to various causes, etc., from 1911 onwards appears at the end of the report.

CITY OF MANCHESTER

BIRTH & DEATH RATES PER 1000 OF THE POPULATION



(Manchester Figures, 52 Weeks.)

WARDS	Estimated populations	Area in acres	Persons per acre	Births (Live)		Deaths		Natural rate of Increase	Deaths under 1 year per 1,000 births
				Total	Rate per 1,000 pop.	Total	Rate per 1,000 pop.		
CITY OF MANCHESTER . .	668660	27255	24·53	13969	20·89	8983	13·43	+ 7·46	63·43
All Saints'	12516	300	41·72	306	24·45	223	17·82	+ 6·63	98·04
Ardwick	17455	426	40·97	459	26·30	255	14·61	+ 11·69	93·68
Beswick	20908	254	82·31	497	23·77	273	13·06	+ 10·71	36·22
Blackley	27341	1158	23·61	575	21·03	290	10·61	+ 10·42	24·35
Bradford	24708	790	31·28	568	22·99	308	12·47	+ 10·52	56·34
Cheetham	21483	555	38·71	427	19·88	284	13·22	+ 6·66	58·55
Chorlton-cum-Hardy	40546	1666	24·34	712	17·56	549	13·54	+ 4·02	51·97
Collegiate Church	7921	446	17·76	212	26·76	157	19·82	+ 6·94	84·91
Collyhurst	11980	232	51·64	363	30·30	173	14·44	+ 15·86	35·81
Crumpsall	23652	2203	10·74	477	20·17	241	10·19	+ 9·98	48·22
Didsbury	30108	2354	12·79	471	15·64	341	11·33	+ 4·31	67·94
Exchange	80	61	1·31	—	—	2	25·00	— 25·00	—
Gorton North	21230	604	35·15	360	16·96	283	13·33	+ 3·63	44·44
Gorton South	25582	628	40·74	446	17·43	341	13·33	+ 4·10	82·96
Harpurhey	17941	344	52·15	463	25·81	245	13·66	+ 12·15	58·32
Levenshulme	19114	606	31·54	286	14·96	260	13·60	+ 1·36	69·93
Longsight	24812	593	41·84	405	16·32	350	14·11	+ 2·21	49·38
Medlock Street	14973	212	70·63	380	25·38	239	15·96	+ 9·42	100·00
Miles Platting	14171	313	45·27	384	27·10	193	13·62	+ 13·48	31·25
Moston	28391	1231	23·06	532	18·74	281	9·90	+ 8·84	30·08
Moss Side East	16223	241	67·32	412	25·40	252	15·53	+ 9·87	101·94
Moss Side West	18748	267	70·22	436	23·26	263	14·03	+ 9·23	96·33
New Cross	12328	303	40·69	221	17·93	251	20·36	— 2·43	104·07
Newton Heath	20241	1005	20·14	471	23·27	275	13·59	+ 9·68	36·09
Openshaw	17944	482	37·23	445	24·80	283	15·77	+ 9·03	69·66
Oxford	187	167	1·12	14	74·87	29	155·08	— 80·21	71·43
Rusholme	19553	806	24·26	350	17·90	249	12·73	+ 5·17	48·57
St. Ann's	17	55	·31	—	—	2	117·65	— 117·65	—
St. Clement's	734	181	4·06	13	17·71	9	12·26	+ 5·45	153·85
St. George's	15700	266	59·02	475	30·25	276	17·58	+ 12·67	98·95
St. John's	1491	199	7·49	40	26·83	24	16·10	+ 10·73	150·00
St. Luke's	19550	316	61·87	437	22·35	369	18·87	+ 3·48	73·23
St. Mark's	18841	340	55·41	408	21·65	286	15·18	+ 6·47	73·53
St. Michael's	11213	243	46·14	336	29·97	191	17·03	+ 12·94	68·45
Withington	47840	1841	25·99	774	16·18	553	11·56	+ 4·62	71·06
Wythenshawe	43138	5567	7·75	814	18·87	383	8·88	+ 9·99	57·74

Manchester—Estimated Populations. Annual Rates of Marriages, Births, and Deaths (*a*) from All Causes, (*b*) from Specified Causes, and (*c*) Infant Mortality; also the Percentages to Total Deaths of Inquest Cases and of Deaths in Public Institutions; also Quinquennial Averages, 1871—1946.

	Year	Estimated Population (Mean)	Marriage Rate per 1,000 persons living	Annual Rates per 1,000 persons living												Percentage to Total Deaths		Infant Mortality	Year
				Births	Deaths (all causes)	Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Typhus Fever	Typhoid and Paratyphoid Fever	Simple Continued Fever	Diarrhoea	Violence	Inquest Cases	Deaths in Public Institutions		
Quinquennial Average	1871–1875	477,344	24·6	38·9	28·3	0·26	0·64	1·08	0·08	0·78	0·14	0·43	0·21	1·95	0·94	7·2	13·4	198	.. 1871–1875
	1876–1880	509,802	18·6	38·7	26·2	0·24	0·53	1·07	0·13	0·84	0·08	0·29	0·11	1·26	0·89	7·5	14·3	172	.. 1876–1880
	1881–1885	542,746	17·9	35·1	23·6	0·04	0·71	0·48	0·10	0·68	0·05	0·20	0·03	0·99	0·72	7·0	15·9	175	.. 1881–1885
	1886–1890	575,630	16·6	33·4	24·6	0·02	0·83	0·50	0·32	0·54	0·02	0·30	0·01	1·08	0·78	6·9	17·7	183	.. 1886–1890
	1891–1895	517,801	16·9	33·2	23·6	0·03	0·62	0·26	0·27	0·64	0·00	0·24	0·01	1·19	0·77	7·1	19·2	186	.. 1891–1895
	1896–1900	539,599	18·2	32·5	22·7	..	0·89	0·20	0·13	0·53	0·00	0·18	0·01	1·69	0·73	7·1	20·2	192	.. 1896–1900
	1901–1905	554,355	17·4	30·9	20·1	0·01	0·55	0·19	0·22	0·41	0·00	0·13	0·00	1·15	0·72	7·1	24·4	173	.. 1901–1905
	1906–1910	660,049	17·0	28·1	17·7	..	0·54	0·16	0·17	0·37	0·00	0·10	0·00	0·76	0·68	7·4	27·3	147	.. 1906–1910
	1911–1915	720,565	17·9	25·3	16·5	..	0·51	0·12	0·14	0·26	..	0·06	..	0·83	0·66	7·4	29·2	133	.. 1911–1915
	1916–1920	B 746,909 D 699,325	18·4	19·9	15·7	..	0·28	0·04	0·08	0·24	..	0·02	0·00	0·33	0·55	6·3	29·7	105	.. 1916–1920
	1921–1925	751,080	16·8	20·6	13·9	..	0·25	0·07	0·10	0·21	..	0·01	..	0·31	0·45	5·7	37·4	96	.. 1921–1925
	1926–1930	752,840	16·6	17·5	13·9	..	0·18	0·02	0·11	0·14	..	0·01	..	0·29	0·50	4·8	42·8	88	.. 1926–1930
	1931–1935	759,180	17·1	15·3	13·4	..	0·11	0·02	0·10	0·08	..	0·00	..	0·15	0·54	4·8	48·3	77	.. 1931–1935
	1936–1940	712,660	21·4	15·2	14·3	..	0·07	0·00	0·09	0·04	..	0·00	..	0·10	0·70	4·9	52·0	71	.. 1936–1940
	1941–1945	608,256	20·9	18·1	15·0	..	0·02	0·00	0·04	0·06	..	0·00	..	0·15	0·68	5·1	50·7	64	.. 1941–1945
	1942	601,900	21·7	17·1	14·7	..	0·03	0·00	0·05	0·03	..	0·01	..	0·15	0·57	4·7	53·4	65	 1942
	1943	599,300	17·3	18·7	15·5	..	0·02	0·00	0·05	0·07	..	0·00	..	0·15	0·59	5·1	53·6	61	 1943
	1944	614,760	18·0	19·9	14·2	..	0·02	..	0·01	0·04	..	..	..	0·12	0·57	4·9	49·5	54	 1944
	1945	623,480	23·8	18·2	14·4	..	0·01	..	0·02	0·04	..	0·00	..	0.14	0·50	4·2	46·5	56	 1945
	1946	668,660	22·3	20·9	13·5	..	0·00	..	0·02	0·05	..	0·00	..	0·25	0·44	3·9	46·1	64	 1946

The populations and rates prior to 1891 are those for the Unions of Manchester, Chorlton, and Prestwich, which have been taken as approximately representing "Manchester." The City was extended to include Moss Side and Withington in November, 1904, Gorton and Levenshulme in November, 1909, and Wythenshawe April, 1931.

Manchester—Annual Rates of Mortality from certain causes of Death.

YEAR	ANNUAL RATES PER 1,000 PERSONS LIVING									RATES PER 1,000 BIRTHS*	
	Cancer	Tuberculosis of Respiratory System	Other Forms of Tuberculosis	Diseases of Nervous System	Diseases of Heart	Diseases of Respiratory System	Diseases of Digestive System	Nephritis	Diseases of Generative System	Puerperal and Post Abortive Sepsis	Other Puerperal Causes
881–1885 ..	0·50	2·42	0·92	3·28	1·37	5·41	1·23	..	0·08	3·03	1·99
886–1890 ..	0·64	2·24	0·95	3·09	1·73	5·76	1·23	..	0·08	3·22	2·13
891–1895 ..	0·62	2·09	0·97	1·74	2·53	5·56	1·07	..	0·07	2·75	3·42
896–1900 ..	0·73	2·04	0·82	1·32	2·54	5·03	1·04	..	0·09	1·55	1·51
901–1905 ..	0·80	1·91	0·71	1·17	1·74	4·24	1·87	0·41	0·08	1·21	1·76
906–1910 ..	0·88	1·66	0·59	0·95	1·72	3·77	1·42	0·44	0·07	1·28	1·49
1911–1915 ..	1·04	1·67	0·47	0·79	1·24	3·62	1·44	0·46	0·09	1·42	2·56
1916–1920 ..	1·21	1·61	0·41	0·54	1·21	3·41	0·84	0·41	0·06	1·70	2·14
1921–1925 ..	1·36	1·27	0·30	0·51	1·39	3·11	0·74	0·34	0·07	1·83	2·10
1926–1930 ..	1·50	1·19	0·21	0·48	1·81	2·65	0·75	0·36	0·07	2·14	2·63
1931–1935 ..	1·67	1·02	0·16	0·41	2·50	1·97	0·55	0·37	0·05	*1·59	*2·20
1936–1940 ..	1·81	0·93	0·14	0·38	3·10	2·07	0·53	0·37	0·06	1·11	2·40
1941–1945 ..	2·10	0·93	0·14	†1·62	3·10	2·39	0·65	0·37	0·03	0·71	1·30
1942..	2·09	0·99	0·13	1·64	3·22	2·13	0·62	0·39	0·04	0·65	1·68
1943..	2·14	0·91	0·16	1·53	3·06	2·64	0·71	0·37	0·01	1·04	1·29
1944..	2·09	0·80	0·11	1·58	3·17	2·04	0·58	0·37	0·01	0·64	1·19
1945..	2·08	0·80	0·13	1·60	2·93	2·33	0·61	0·34	0·03	0·25	0·77
1946..	1·92	0·69	0·10	1·43	2·81	2·11	0·68	0·32	0·00	0·35	1·25

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* Maternal Mortality rates until 1930 were based on per 1,000 Live Births. From 1931 onwards these rates were calculated on per 1,000 Live and Stillbirths.

† Diseases of Nervous System includes Cerebral Hæmorrhage from 1941. From 1911 rates are based on Registrar General's Returns.

Manchester, 1946—Causes of Death in Infancy and Childhood.

(*Manchester figures*, 52 *weeks.*)

CAUSES OF DEATH	UNDER ONE YEAR			Total under One Year	ONE AND UNDER FIVE YEARS				Total under Five Years
	Under 3 months	3–6 months	6–12 months		1–	2–	3–	4–	
All Causes	646	142	98	886	52	21	17	17	993
Chicken Pox	...	1	...	1	...	...	...	...	1
Measles	...	1	1	2	1	...	...	...	3
Scarlet Fever	...	...	...	...	...	...	...	...	...
Whooping Cough	7	5	9	21	3	5	3	...	32
Diphtheria	...	...	...	...	...	1	1	3	5
Erysipelas	...	...	...	...	...	...	...	...	...
Syphilis	3	1	1	5	...	...	...	...	5
Tabes Mesenterica and Tuberc. Peritonitis	...	...	...	...	...	...	...	...	...
Tubercular Meningitis	...	...	4	4	3	3	1	3	14
Tuberculosis (Other)	1	3	4	8	2	2	...	...	12
Rickets	...	...	...	...	...	...	...	...	...
Premature Birth	192	...	...	192	...	...	...	...	192
Injury at Birth and Congen. Malformations	136	16	5	157	5	...	2	...	164
Atelectasis	45	1	1	47	...	...	...	...	47
Others of early infancy	41	3	...	44	...	...	...	...	44
Convulsions	6	7	1	14	1	...	...	...	15
Meningitis	...	...	2	2	1	1	...	...	4
Nervous Diseases (Other)	6	2	4	12	5	...	...	1	18
Diarrhœal Diseases	95	53	20	168	1	...	...	...	169
Gastritis	...	...	...	...	...	...	...	...	...
Digestive Diseases (Other)	...	...	...	...	...	...	...	...	...
Bronchitis	11	3	8	22	3	1	1	...	27
Pneumonia	63	28	26	117	15	1	1	...	134
Respiratory Diseases (Other)	7	2	...	9	2	...	1	...	12
Found Dead in Bed (overlaid)	8	...	...	8	...	...	...	...	8
Suffocation	4	5	1	10	...	...	...	...	10
Violence (Other forms)	5	1	...	6	4	5	4	5	24
Ill-defined Causes	1	...	...	1	...	...	...	...	1
Other Causes	15	10	11	36	6	2	3	5	52

Manchester, 1946—Deaths in Wards for Various Diseases and Death Rates per 1,000 of the Population.

(*Manchester Figures, 52 Weeks.*)

WARDS	POPULATION	WHOOPING COUGH		DIPHTHERIA		MEASLES		TUBERCULOSIS ALL FORMS		SYPHILITIC DISEASES		CANCER ALL SITES		PNEUMONIA		BRONCHITIS		DISEASES OF HEART AND CIRCULATORY SYSTEM		DIGESTIVE SYSTEM		URINARY SYSTEM		ALL CAUSES	
		Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
CITY OF MANCHESTER..	668660	33	·05	11	·02	3	·004	524	·78	47	·07	1274	1·91	399	·60	892	1·33	2251	3·37	456	·68	320	·48	8983	13·43
All Saints'	12516	—	—	—	—	—	—	26	2·08	2	·16	19	1·52	10	·80	31	2·48	44	3·52	15	1·20	9	·72	223	17·82
Ardwick	17455	3	·17	—	—	—	—	14	·80	3	·17	19	1·09	19	1·09	30	1·72	68	3·90	23	1·32	3	·17	255	14·61
Beswick	20908	1	·05	—	—	—	—	12	·57	—	—	36	1·72	18	·86	42	2·01	66	3·16	9	·43	12	·57	273	13·06
Blackley	27341	—	—	1	·04	—	—	13	·48	—	—	52	1·90	7	·26	32	1·17	73	2·67	21	·77	8	·29	290	10·61
Bradford	24708	—	—	2	·08	—	—	24	·97	2	·08	44	1·78	15	·61	27	1·09	62	2·51	16	·65	12	·49	308	12·47
Cheetham	21483	1	·05	—	—	—	—	9	·42	3	·14	42	1·95	8	·37	26	1·21	65	3·03	9	·42	13	·61	284	13·22
Chorlton-cum-Hardy	40546	1	·02	—	—	—	—	23	·57	3	·07	75	1·85	22	·54	41	1·01	170	4·19	24	·59	31	·76	549	13·51
Collegiate Church	7921	1	·13	—	—	—	—	11	1·39	—	—	21	2·65	8	1·01	10	1·26	28	3·53	6	·76	6	·76	157	19·82
Collyhurst	11980	2	·17	—	—	—	—	11	·92	2	·17	29	2·42	7	·58	26	2·17	33	2·75	7	·58	1	·33	173	14·44
Crumpsall	23652	2	·08	—	—	—	—	13	·55	1	·04	31	1·31	12	·51	16	·68	67	2·83	13	·55	6	·25	241	10·19
Didsbury	30108	1	·03	—	—	—	—	12	·40	1	·03	44	1·46	14	·46	24	·80	111	3·69	15	·50	17	·56	341	11·33
Exchange	80	—	—	—	—	—	—	1	12·50	—	—	—	—	—	—	—	—	—	—	1	12·50	—	—	2	25·00
Gorton North	21230	2	·09	—	—	—	—	17	·80	—	—	52	2·45	12	·57	32	1·51	79	3·72	16	·75	10	·47	283	13·33
Gorton South	25582	—	—	—	—	—	—	21	·82	1	·04	52	2·03	15	·59	38	1·49	74	2·89	15	·59	16	·63	341	13·33
Harpurhey	17941	—	—	1	·06	—	—	12	·67	1	·06	39	2·17	6	·33	30	1·67	63	3·51	18	1·00	6	·33	245	13·66
Levenshulme	19114	2	·10	—	—	—	—	9	·47	1	·05	39	2·04	9	·47	19	·99	78	4·08	13	·68	6	·31	260	13·60
Longsight	24812	—	—	—	—	—	—	16	·64	2	·08	59	2·38	16	·64	25	1·01	102	4·11	15	·60	14	·56	350	14·11
Medlock Street	14973	3	·20	1	·07	—	—	12	·80	2	·13	31	2·07	6	·40	32	2·14	42	2·81	13	·87	5	·33	239	15·96
Miles Platting	14171	1	·07	1	·07	—	—	10	·71	1	·07	27	1·91	4	·28	33	2·33	38	2·68	9	·64	6	·12	193	13·62
Moston	28391	—	—	—	—	—	—	15	·53	—	—	46	1·62	13	·46	33	1·16	81	2·85	12	·42	12	·42	281	9·90
Moss Side East	16223	1	·06	—	—	—	—	14	·86	1	·06	37	2·28	17	1·05	27	1·66	58	3·58	16	·99	8	·49	252	15·53
Moss Side West	18748	1	·05	—	—	1	·05	18	·96	1	·05	35	1·87	8	·43	22	1·17	61	3·25	15	·80	10	·53	263	14·03
New Cross	12328	2	·16	2	·16	—	—	24	1·95	2	·16	21	1·70	13	1·05	36	2·92	57	4·62	10	·81	8	·65	251	20·36
Newton Heath	20241	2	·10	—	—	—	—	15	·74	1	·05	35	1·73	12	·59	30	1·48	87	4·30	7	·35	14	·69	275	13·59
Openshaw	17944	2	·11	1	·06	1	·06	16	·89	3	·17	43	2·40	14	·78	24	1·34	71	3·96	9	·50	11	·61	283	15·77
Oxford	187	—	—	—	—	—	—	3	16·04	—	—	6	32·09	2	10·70	2	10·70	6	32·09	2	10·70	—	—	29	155·08
Rusholme	19553	1	·05	—	—	1	·05	16	·82	—	—	33	1·69	8	·41	18	·92	59	3·02	10	·51	14	·72	219	12·73
St. Ann's	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	58·82	—	—	—	—	2	117·65
St. Clement's	734	—	—	—	—	—	—	—	—	—	—	—	—	2	2·72	—	—	3	4·09	1	1·36	—	—	9	12·26
St. George's	15700	—	—	—	—	—	—	13	·83	3	·19	37	2·36	24	1·53	21	1·31	63	4·01	13	·83	4	·25	276	17·58
St. John's	1491	—	—	—	—	—	—	2	1·34	—	—	3	2·01	3	2·01	2	1·34	7	4·69	1	·67	—	—	24	16·10
St. Luke's	19550	2	·10	1	·05	—	—	27	1·38	3	·15	40	2·05	15	·77	35	1·79	98	5·01	15	·77	12	·61	369	18·87
St. Mark's	18841	—	—	—	—	—	—	29	1·54	2	·11	48	2·55	13	·69	42	2·23	63	3·34	13	·69	4	·21	286	15·18
St. Michael's	11213	1	·09	1	·09	—	—	13	1·16	2	·18	28	2·50	8	·71	29	2·59	35	3·12	10	·89	5	·45	191	17·03
Withington	47840	1	·02	—	—	—	—	23	·48	3	·06	100	2·09	22	·46	34	·71	143	2·99	35	·73	21	·44	553	11·56
Wythenshawe..	43138	—	—	—	—	—	—	30	·70	1	·02	51	1·18	17	·39	23	·53	95	2·20	29	·67	13	·30	383	8·88

INFANT MORTALITY.

Deaths from Various Causes per 1,000 Live Births.

Calculated from Registrar General's Return.

Manchester.

Cause of Death	Rate per 1,000 Live Births					
	1941	1942	1943	1944	1945	1946
ll causes	84·47	64·52	60·88	53·59	55·80	63·71
yphoid and Paratyphoid Fevers ..	..	..	..	..	..	..
erebro Spinal Fever	1·01	0·39	0·36	0·16	0·44	0·29
carlet Fever	..	..	..	..	..	..
Whooping Cough	3·35	0·97	1·61	1·06	1·06	1·57
Diphtheria	0·10	0·29	..	..	..	..
Tuberculosis of Respiratory System..	..	0·10	0·09	..	0·26	0·22
Other forms of Tuberculosis	0·20	0·49	0·27	0·41	0·35	0·64
Syphilitic Diseases	0·51	0·78	0·63	0·41	0·53	0·43
Influenza	0·71	0·10	0·45	0·33	0·18	0·21
Measles	0·81	0·39	0·27	0·16	0·26	0·14
Acute Poliomyelitis and Polioencephalitis	..	..	..	..	..	..
Acute Infectious Encephalitis	..	..	..	..	..	..
Cancer of all Sites	..	..	..	..	..	..
Intra-Cranial Vascular Lesions ..	..	0·10	..	..	0·26	0·29
Heart Disease	..	..	..	..	..	..
Other Diseases of Circulatory System	0·10	..	..	..	..	..
Bronchitis	3·76	1·46	2·95	1·39	2·55	1·58
Pneumonia	14·01	8·37	10·10	8·93	8·54	8·95
Other Respiratory Diseases	0·30	0·58	0·54	0·24	0·44	0·57
Diarrhoea (under 2 years)	11·07	8·56	7·60	5·90	7·30	11·96
Other Digestive Diseases	1·83	1·26	0·89	0·65	0·53	0·57
Nephritis	0·10	..	0·09	..	..	0·07
Premature Birth	17·87	18·20	14·93	13·44	11·35	13·74
Congenital Malformations, Birth Injuries, and Infantile Diseases ..	17·26	16·35	14·93	14·50	16·63	17·40
Violent Causes	2·54	1·07	0·89	1·88	1·41	1·79
All other causes	8·93	5·06	4·29	4·10	3·70	3·29

Deaths under One Year of Age from Premature Birth, Diarrhoea, and Other Causes, 1938—1946.

Manchester—(From Registrar-General's Returns).

Year	Premature Birth		Diarrhoea		Other Causes		Total Deaths	Infant Mortality Rate per 1,000 Live Births
	Deaths	Rate per 1,000 Live Births	Deaths	Rate per 1,000 Live Births	Deaths	Rate per 1,000 Live Births		
1938 ..	192	17·4	74	6·7	495	44·9	761	69·0
1939 ..	161	15·5	60	5·8	413	39·8	634	61·1
1940 ..	146	14·0	70	6·7	513	49·4	729	70·2
1941 ..	176	17·9	109	11·0	547	55·5	832	84·5
1942 ..	187	18·2	88	8·6	388	37·8	663	64·5
1943 ..	167	14·9	85	7·6	429	38·4	681	60·8
1944 ..	164	13·4	72	5·9	418	34·3	654	53·6
1945 ..	129	11·4	83	7·3	422	37·1	634	55·8
1946 ..	192	13·7	167	12·0	531	38·0	890	63·7

From Registrar-General's Return.

YEAR	LIVE BIRTHS, ENGLAND AND WALES				LIVE BIRTHS, MANCHESTER			
	Total	Legitimate	Illegitimate	Illegitimate % of total live births	Total	Legitimate	Illegitimate	Illegitimate % of total live births
1911	881,138	843,505	37,633	4·27	18,595	17,794	801	4·31
1912	872,737	835,209	37,528	4·30	18,311	17,576	735	4·01
1913	881,890	843,981	37,909	4·30	18,791	18,018	773	4·11
1914	879,096	841,767	37,329	4·25	18,779	17,972	807	4·30
1915	814,614	778,369	36,245	4·45	16,696	15,956	740	4·43
1916	785,520	747,831	37,689	4·80	15,597	14,901	696	4·46
1917	668,346	631,189	37,157	5·56	12,937	12,195	742	5·74
1918	662,773	621,620	41,153	6·21	12,926	12,053	873	6·75
1919	692,438	650,562	41,876	6·05	13,686	12,758	928	6·78
1920	957,994	913,727	44,267	4·62	19,213	18,253	960	4·99
1921	848,814	810,196	38,618	4·52	17,549	16,647	902	5·14
1922	780,124	745,986	34,138	4·38	15,787	15,013	774	4·90
1923	758,131	726,609	31,522	4·16	15,388	14,677	711	4·62
1924	729,933	699,637	30,296	4·15	14,483	13,826	657	4·54
1925	710,582	681,686	28,896	4·07	14,162	13,493	669	4·72
1926	694,563	664,972	29,591	4·26	13,969	13,290	679	4·86
1927	654,172	625,149	29,023	4·35	13,036	12,388	648	4·97
1928	660,267	630,565	29,702	4·50	12,902	12,256	646	5·01
1929	643,673	614,366	29,307	4·55	13,058	12,380	678	5·19
1930	648,811	619,129	29,682	4·57	12,851	12,178	673	5·24
1931	632,081	603,995	28,086	4·44	12,337	11,694	643	5·21
1932	613,972	586,961	27,011	4·39	11,825	11,206	619	5·24
1933	580,413	555,005	25,408	4·37	11,156	10,582	574	5·15
1934	597,642	571,857	25,785	4·31	11,555	10,974	581	5·03
1935	598,756	573,651	25,105	4·19	11,379	10,842	537	4·72
1936	605,292	580,397	24,895	4·11	11,231	10,681	550	4·90
1937	610,557	585,216	25,341	4·15	10,786	10,268	518	4·80
1938	621,204	594,825	26,379	4·25	11,025	10,468	557	5·05
1939	619,352	593,410	25,942	4·19	10,378	9,807	571	5·50
1940	607,029	581,156	25,873	4·26	10,388	9,873	515	4·96
1941	587,228	556,297	30,931	5·27	9,849	9,239	610	6·19
1942	654,039	617,845	36,194	5·53	10,276	9,680	596	5·80
1943	682,654	639,549	43,105	6·31	11,185	10,431	754	6·74
1944	745,318	692,933	52,385	7·03	12,204	11,239	965	7·91
1945	685,273	621,209	64,064	9·35	11,362	10,175	1187	10·45
1946 .. .. (provisional)	819,894	764,990	54,904	6·70	13,969	12,874	1095	7·84

Deaths of Infants under One Year of Age.
Manchester, 1911 to 1946.
From Registrar-General's Return.

Year	Total live births	Total deaths under one year	Deaths per 1,000 of the total live births	Legitimate births	Legitimate deaths	Deaths per 1,000 legitimately born	Illegitimate births	Illegitimate deaths	Deaths per 1,000 illegitimately born
1911	18,595	2,908	156·38	17,794	2,646	148·70	801	262	327·09
1912	18,311	2,251	122·93	17,576	2,082	118,46	735	169	229·93
1913	18,791	2,415	128·52	18,018	2,239	124·26	773	176	227·68
1914	18,779	2,423	129·03	17,972	2,218	123·41	807	205	254·03
1915	16,696	2,141	128·24	15,956	1,959	122·78	740	182	245·95
1916	15,597	1,737	111·37	14,901	1,578	105·90	696	159	228·45
1917	12,937	1,438	111·15	12,196	1,262	103·48	742	176	237·20
1918	12,926	1,381	106·83	12,053	1,201	100·00	873	180	206·19
1919	13,686	1,333	97·40	12,758	1,173	91·94	928	160	172·41
1920	19,213	1,882	97·95	18,253	1,169	91·44	960	213	221·88
1921	17,549	1,713	97·61	16,647	1,542	92·63	902	171	189·58
1922	15,787	1,525	96·60	15,013	1,375	91·59	774	150	193·80
1923	15,388	1,360	88·35	14,677	1,243	84·69	711	117	164·56
1924	14,483	1,454	100·39	13,826	1,316	95·18	657	138	210·05
1925	14,162	1,364	96·31	13,493	1,251	92·72	669	113	168·91
1926	13,969	1,216	87·05	13,290	1,116	83·97	679	100	147·28
1927	13,036	1,122	86·07	12,388	1,032	83·31	648	90	138·89
1928	12,902	1,179	91·38	12,256	1,084	88·44	646	95	147·06
1929	13,058	1,272	97·41	12,380	1,144	92·41	678	128	188·79
1930	12,851	995	77·43	12,178	881	72·34	673	114	169·39
1931	12,337	1,049	85·03	11,694	956	81·75	643	93	144·64
1932	11,825	1,015	85·83	11,206	934	83·35	619	81	130·86
1933	11,156	834	74·76	10,582	769	72·67	574	65	113·24
1934	11,155	798	69·06	10,974	742	67·61	581	56	96·39
1935	11,379	809	71·09	10,842	757	69·82	537	52	96·83
1936	11,231	863	76·84	10,681	816	76·40	550	47	85·45
1937	10,786	823	76·30	10,268	770	74·99	518	53	102·32
1938	11,025	761	69·03	10,468	702	67·06	557	59	105·92
1939	10,378	634	61·09	9,807	587	59·85	571	47	82·31
1940	10,388	729	70·18	9,873	677	68·57	515	52	100·97
1941	9,849	832	84·47	9,239	767	83·02	610	65	106·56
1942	10,276	663	64·52	9,680	621	64·15	596	42	70·47
1943	11,185	681	60·88	10,431	625	59·92	754	56	74·27
1944	12.204	654	53·59	11,239	577	51·34	965	77	79·79
1945	11,362	634	55·80	10,175	557	54·74	1187	77	64·87
1946	13,969	890	63·71	12,874	798	61·98	1095	92	84·02

(Manchester Figures, 52 Weeks.)

WARDS	Live Births				Deaths under 1 Year					
	Total	Legitimate	Illegitimate	% Illegitimate to Total Live Births	Total	Legitimate	Illegitimate	Rate per 1000 Live Births Total	Rate per 1000 Live Births Legitimate	Rate per 1000 Live Births Illegitimate
City of Manchester..	13969	12874	1095	7·84	886	796	90	63·43	61·83	82·19
All Saints'	306	256	50	16·34	30	25	5	98·04	97·66	100·00
Ardwick	459	413	46	10·02	43	36	7	93·63	87·17	152·17
Beswick	497	473	24	4·83	18	17	1	36·22	35·94	41·67
Blackley..	575	551	24	4·17	14	12	2	24·35	21·78	83·33
Bradford	568	538	30	5·28	32	30	2	56·34	55·76	66·67
Cheetham	427	394	33	7·33	25	24	1	58·55	60·91	30·30
Chorlton-cum-Hardy	712	664	48	6·74	37	34	3	51·97	51·20	62·50
Collegiate Church..	212	194	18	8·49	18	16	2	84·91	82·47	111·11
Collyhurst	363	345	18	4·96	13	12	1	35·81	34·78	55·56
Crumpsall	477	460	17	3·56	23	22	1	48·22	47·83	58·82
Didsbury	471	446	25	5·31	32	28	4	67·94	62·78	160·00
Exchange	—	—	—	—	—	—	—	—	—	—
Gorton North	360	346	14	3·89	16	14	2	44·44	40·46	142.86
Gorton South	446	409	37	8·30	37	36	1	82·96	88·02	27.03
Harpurhey	463	434	29	6·26	27	25	2	58·32	57·60	68.97
Levenshulme	286	269	17	5·94	20	20	—	69·93	74·35	—
Longsight	405	366	39	9·63	20	17	3	49·38	46·45	76·92
Medlock Street	380	333	47	12·37	38	33	5	100.00	99·10	106·38
Miles Platting	384	354	30	7·81	12	9	3	31·25	25·42	100·00
Moston	532	504	28	5·26	16	15	1	30·08	29·76	35·71
Moss Side East	412	352	60	14·56	42	34	8	101·94	96·59	133·33
Moss Side West	436	390	46	10·55	42	38	4	96·33	97·44	86·96
New Cross	221	203	18	8·14	23	22	1	104·07	108·37	55·56
Newton Heath	471	437	34	7·22	17	17	—	36·09	38·90	—
Openshaw	445	415	30	6·74	31	30	1	69·66	72·29	33·33
Oxford	14	14	—	—	1	1	—	71·43	71·43	—
Rusholme	350	329	21	6·00	17	15	2	48·57	45·59	95·24
St. Ann's	—	—	—	—	—	—	—	—	—	—
St. Clement's	13	11	2	15·38	2	2	—	153·85	181·82	—
St. George's	475	406	69	14·53	47	43	4	98·95	105·91	57·97
St. John's	40	32	8	20·00	6	5	1	150·00	156·25	125·00
St. Luke's	437	358	79	18·08	32	24	8	73· 3	67·04	101·27
St. Mark's	408	382	26	6·37	30	29	1	73·53	75·92	38·46
St. Michael's	336	306	30	8·93	23	20	3	68.45	65·36	100·00
Withington	774	733	41	5·30	55	49	6	71.06	66·85	146·34
Wythenshawe	814	757	57	7·00	47	42	5	57·74	55·48	87·32

Stillbirths, Neo-Natal Deaths, and Deaths at Four Weeks to One Year of Age per 1,000 Births (Live and Stillbirth), also Infant Death Rate per 1,000 Live Births.

Manchester.

Year	Total live and stillbirths	STILLBIRTHS		NEO-NATAL DEATHS		DEATHS, 4 WEEKS—1 YEAR		DEATHS UNDER 1 YEAR AND STILLBIRTHS		Infant death rate per 1,000 live births
		Number of stillbirths	Rate per 1,000 live and stillbirths	Number of neo-natal deaths, 0—4 weeks	Rate per 1,000 total live and stillbirths	Number of deaths, 4 weeks—1 year	Rate per 1,000 total live and stillbirths	Number of deaths under 1 year and stillbirths	Rate per 1,000 total live and stillbirths	
1929	13,686	628	45·89	489	35·73	783	57·22	1,900	138·84	97·41
1930	13,490	639	47·37	413	30·62	582	43·14	1,634	121·13	77·43
1931	12,965	628	48·44	417	32·16	632	48·75	1,677	129·35	85·03
1932	12,386	561	45·29	418	33·75	597	48·20	1,576	127·24	85·83
1933	11,738	582	49·58	385	32·80	449	38·25	1,416	120·63	74·76
1934	12,090	535	44·25	390	32·26	408	33·75	1,333	110·26	69·06
1935	11,925	546	45·79	381	31·95	428	35·89	1,355	113·63	71·09
1936	11,762	531	45·15	385	32·73	478	40·64	1,394	118·52	76·84
1937	11,254	468	41·59	381	33·86	442	39·28	1,291	114·71	76·30
1938	11,532	507	43·96	351	30·44	410	35·55	1,268	109·95	69·03
1939	10,870	492	45·26	321	29·53	313	28·80	1,126	103·59	61·09
1940	10,866	478	43·99	295	27·15	434	39·94	1,207	111·08	70·18
1941	10,249	400	39·03	292	28·49	540	52·69	1,232	120·21	84·47
1942	10,719	443	41·33	304	28·36	359	33·49	1,106	103·18	64·52
1943	11,591	406	35·02	306	26·40	375	32·35	1,087	93·77	60·88
1944	12,571	367	29·19	315	25·06	339	26·97	1,021	81·22	53·59
1945	11,734	372	31·70	311	26·50	323	27·53	1,006	85·73	55·80

Notifiable Infectious Diseases other than Tuberculosis.

The following cases were notified in the various Wards of the City during the year ended December 31st, 1946 :—

	Typhoid Fever	Paratyphoid Fevers	Cerebro-spinal Fever	Scarlet Fever	Whooping Cough	Diphtheria	Erysipelas	Ophthalmia Neonatorum	Dysentery	Malaria (contracted in England & Wales)	Relapsing Fever	Smallpox	Measles	Poliomyelitis (acute)	Polio-encephalitis (acute)	Encephalitis Lethargica (acute)	Typhus Fever	Primary Pneumonia	Broncho Pneumonia	Influenzal Pneumonia	Puerperal Pyrexia	German Measles	Pemphigus Neonatorum	Total Cases of Infectious Disease
Total for City	7	11	33	775	2,265	259	124	101	167	—	—	—	3,800	6	—	—	—	698	228	114	245	351	25	9,209
WARDS																								
ALL SAINTS'	1	—	2	9	21	8	—	—	3	—	—	—	122	1	—	—	—	9	7	1	19	5	3	211
ARDWICK	—	1	—	11	69	4	4	3	1	—	—	—	96	—	—	—	—	25	7	—	12	24	—	257
BESWICK	—	—	3	15	60	6	5	2	1	—	—	—	145	—	—	—	—	25	6	1	6	4	—	279
BLACKLEY	—	—	3	53	90	7	3	—	2	—	—	—	42	—	—	—	—	17	4	4	5	7	4	241
BRADFORD	1	—	—	16	75	18	2	5	5	—	—	—	98	—	—	—	—	44	7	1	5	4	1	282
CHEETHAM	—	—	—	23	42	4	5	3	1	—	—	—	38	—	—	—	—	10	1	5	6	10	—	148
CHORLTON-CUM-HARDY	—	2	—	37	165	4	5	8	2	—	—	—	107	1	—	—	—	29	2	1	6	7	—	376
COLLEGIATE CHURCH	—	—	—	14	29	8	1	3	—	—	—	—	17	—	—	—	—	10	2	1	5	—	—	90
COLLYHURST	1	—	—	9	47	4	4	6	—	—	—	—	32	—	—	—	—	13	1	2	7	—	—	126
CRUMPSALL	—	1	1	34	93	5	3	1	—	—	—	—	43	—	—	—	—	15	3	1	5	13	—	228
DIDSBURY	—	1	4	60	83	10	9	1	4	—	—	—	255	—	—	—	—	13	—	2	15	64	1	522
EXCHANGE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
GORTON NORTH	—	—	—	15	76	6	1	3	1	—	—	—	105	—	—	—	—	41	14	10	2	7	4	285
GORTON SOUTH	—	—	2	17	99	14	4	6	3	—	—	—	143	—	—	—	—	23	9	13	5	4	—	342
HARPURHEY	—	—	1	35	57	7	5	—	4	—	—	—	21	—	—	—	—	10	5	—	10	1	1	147
LEVENSHULME	—	—	1	19	40	1	1	1	1	—	—	—	105	—	—	—	—	3	1	1	2	12	—	188
LONGSIGHT	2	—	1	36	43	5	6	2	3	—	—	—	180	1	—	—	—	30	8	6	8	21	—	352
MEDLOCK STREET	—	—	1	15	42	6	3	1	2	—	—	—	336	—	—	—	—	27	11	2	5	4	1	456
MILES PLATTING	—	—	—	16	119	8	5	2	1	—	—	—	19	—	—	—	—	31	9	5	9	1	—	225
MOSTON	—	—	3	27	89	5	4	3	2	—	—	—	63	—	—	—	—	14	3	9	7	3	1	233
MOSS SIDE EAST	—	—	2	24	33	4	2	2	5	—	—	—	179	—	—	—	—	18	7	1	6	5	—	288
MOSS SIDE WEST	—	—	1	14	35	11	4	1	—	—	—	—	157	—	—	—	—	19	1	2	4	8	—	257
NEW CROSS	—	—	3	10	68	19	2	5	2	—	—	—	16	—	—	—	—	24	23	2	17	3	—	194
NEWTON HEATH	—	1	—	21	159	4	9	7	—	—	—	—	50	—	—	—	—	42	24	14	6	2	—	339
OPENSHAW	—	—	1	13	55	7	1	12	3	—	—	—	122	1	—	—	—	23	7	5	7	10	—	267
OXFORD	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	1	—	—	3	—	—	7
RUSHOLME	—	—	—	26	38	3	4	—	1	—	—	—	138	—	—	—	—	15	7	1	6	17	—	256
ST. ANN'S	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ST. CLEMENT'S	—	—	—	—	1	—	1	—	—	—	—	—	1	—	—	—	—	1	1	—	—	—	—	5
ST. GEORGE'S	—	1	—	13	48	7	6	5	1	—	—	—	323	—	—	—	—	32	11	—	8	1	3	459
St. JOHN'S	—	—	—	2	9	—	1	—	—	—	—	—	8	—	—	—	—	3	1	1	1	—	—	26
ST. LUKE'S	—	2	—	15	35	13	3	8	—	—	—	—	59	1	—	—	—	18	8	2	11	10	—	185
ST. MARK'S	—	1	—	19	92	37	4	1	1	—	—	—	182	—	—	—	—	28	6	5	8	48	2	434
ST. MICHAEL'S	—	—	—	12	50	11	5	3	1	—	—	—	16	—	—	—	—	13	5	1	4	7	—	128
WITHINGTON	—	1	1	81	121	5	8	3	2	—	—	—	407	1	—	—	—	19	6	10	13	30	2	710
WYTHENSHAWE	2	—	3	64	182	8	4	4	1	—	—	—	172	—	—	—	—	53	21	5	12	19	2	552
HOSPITALS AND INSTITUTIONS	—	—	—	—	—	—	—	—	114	—	—	—	—	—	—	—	—	—	—	—	—	—	—	114

INFECTIOUS DISEASES.

The deaths from the more common diseases are shown in the following figures :—

	Years	
	1941–45 Average	1946
Measles	13	3
Whooping Cough	33	32
Scarlet Fever	1	—
Diphtheria	25	11
Influenza	96	105
Pneumonia (all forms)	420	399
Enteric Fever	1	1
Diarrhoea	90	169
Phthisis	561	460

Consultations.

17 consultation visits were made during the year by medical officers of the Department at the request of medical practitioners in the City in connection with the diagnosis of cases of infectious disease in which the nature of the illness was in doubt.

SMALLPOX.

The case which was diagnosed in the City on the 20th April, 1946, was that of a soldier who returned to this country from Rangoon for demobilisation, disembarking at a southern port on the 12th April. He travelled to the Manchester area on the 13th April on demobilisation leave, and decided, as he was not feeling well, to reside temporarily in Manchester prior to travelling to his home in Monmouthshire. He stated that unsuccessful vaccinations had been performed in 1942 and 1943, but he was vaccinated in infancy.

From 13th April until 17th April, he was resident in a Servicemen's Club in the City. It appears that although he was feeling ill during the whole of that time he did not report his illness nor did he seek medical attention. He collapsed on 17th April, and as a result was seen by a military medical officer, who sent him into Crumpsall Hospital. The appearance of a rash during the day of the 18th April caused him to be transferred to the isolation hospital on the following day and smallpox was diagnosed on the 20th April. The patient was transferred to Clayton Smallpox Hospital on the 21st April and died on the 28th April of haemorrhaic smallpox.

The tracing of contacts was undertaken and all discoverable contacts were vaccinated or re-vaccinated, including members of the staff and servicemen at the Club, the staffs of the three hospitals concerned, and members of the staff of the Public Health Department, making a total number vaccinated 707. Many of the servicemen contacts at the Club had left and their names and service numbers were forwarded to the appropriate authorities.

The presence of an undetected severe case of smallpox over a period of several days, during which the patient was apparently moving about the City, constituted a serious menace to the public health and the large number of contacts and possible contacts added to the danger of the spread of smallpox in the area. Fortunately there were no further cases, which was possibly due to the fact that most of the contacts were service personnel who in the main were highly protected by vaccination.

SCARLET FEVER.

There were 775 known cases of scarlet fever in 1946.

There were no deaths and the type of disease continued to be mild compared with that which was prevalent in former years.

53 per cent. of the patients were removed to hospital, and a review of these cases is contained in a statement of the Medical Superintendent of Monsall Hospital.

1946—Scarlet Fever Cases in Wards, with Attack Rate, Case Mortality, and Removals to Hospital per cent.

Wards	Cases	Attack Rate per 1,000 Living	Case Mortality per cent.	Removals to Hospital per cent.
City	**775**	**1·16**	—	**53**
All Saints'	9	0·72	—	89
Ardwick	11	0·63	—	64
Beswick	15	0·72	—	73
Blackley	53	1·94	—	45
Bradford	16	0·65	—	81
Cheetham..	23	1·07	—	70
Chorlton-cum-Hardy ..	37	0·91	—	49
Collegiate Church	14	1·77	—	71
Collyhurst	9	0·75	—	78
Crumpsall	34	1·44	—	59
Didsbury	60	1·99	—	25
Exchange	—	—	—	—
Gorton North	15	0·71	—	67
Gorton South	17	0·66	—	65
Harpurhey	35	1·95	—	46
Levenshulme	19	0·99	—	47
Longsight	36	1·45	—	28
Medlock Street	15	1·00	—	73
Miles Platting	16	1·13	—	88
Moston	27	0·95	—	41
Moss Side East	24	1·48	—	63
Moss Side West	14	0·75	—	71
New Cross	10	0·81	—	90
Newton Heath	21	1·04	—	33
Openshaw	13	0·72	—	69
Oxford	—	—	—	—
Rusholme..	26	1·33	—	58
St. Ann's	—	—	—	—
St. Clement's	—	—	—	—
St. George's	13	0·83	—	54
St. John's	2	1·34	—	50
St. Luke's	15	0·77	—	67
St. Mark's	19	1·01	—	26
St. Michael's	12	1·07	—	92
Withington	81	1·70	—	47
Wythenshawe	64	1·48	—	53

Scarlet Fever " Return " Cases, 1946.

Out of 435 discharges from Monsall Hospital, 6 gave rise to at least 6 " return " cases, a " return " case rate per cent. of 1·4 as compared with 1·0 in 1945.

The following table shows the interval in days between return home of hospital patients and onset of illness in " return " cases.

Days	0–6	7–13	14–20	21–27
No. of Cases	1	3	2	—

DIPHTHERIA.

The following figures show the number of cases notified and accepted as diphtheria each year for the last ten years :—

1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
1,397	1,193	799	716	770	589	791	266	302	259

Mortality.

The case mortality rate in 1946 was 4·25 per cent. compared with an average of 3·66 in the previous five years. The death rate per 1,000 of the population in Manchester was 0·02 compared with 0·01 in the country as a whole.

There has been a striking reduction in the case mortality rate in recent years. Reference to the following table shows that although the rate continues to be highest in children under 5 years, it is in this group that the greatest percentage reduction has been attained.

TABLE 1.

Diphtheria.—Manchester Case Mortality Rates per cent. in Age Groups.

	0–5 years	5–10 years	10–15 years	15 years and over
1901–10	33·5	17·8	6·0	4·5
1937–46	7·0	6·6	1·7	1·5
Percentage Reduction	79·1	62·9	71·7	66·7

" Carriers " and the Virulence Test.

Of the total number of formal notifications received it was found on investigation that 50 related to persons who were merely " carriers " of diphtheria. In addition, a further 7 " carriers " were discovered who were not notified as suffering from diphtheria.

The following table relates to 12 " carriers " in which a virulence test was made and is of interest in showing the types of " carriers " and the number who were capable of spreading infection.

Diphtheria " Carriers " and Virulence Tests, 1946.

Type	No. of "Carriers"	No. Virulent	No. Non-virulent	Per cent. Virulent
Nose	5	3	2	60·0
Throat	5	3	2	60·0
Nose and Throat	2	2	—	100·0
Total	12	8	4	66·0

Swabs.

A total of 833 swabs were submitted to the Public Health Laboratory upon request by medical practitioners during the year and, of these, 37 or 4·4 per cent. proved positive. So far as was practicable, swabs were taken from the throats and noses of all members under 14 years of age of each family where there had occurred a case of diphtheria.

Supply of Antitoxin.

Diphtheria antitoxin, in phials containing 8,000 units, is supplied free of charge to all medical practitioners for the treatment of persons residing temporarily or permanently in the City, and it may be obtained from the Health Department during office hours or at any time from the following fire stations :—Ash Street, Harpurhey ; New Street, Miles Platting ; Upton Street, Chorlton-upon-Medlock. It may also be obtained at any time from all of the district police stations. The total quantity supplied in this manner in 1946 was 388 phials (3,104,000 units), at a cost of £88 7s. 10d.

The following table shows that the number of attacks is highest in children up to 10 years.

TABLE II.

Diphtheria.—Number of Cases, of Deaths, and Case Mortality at Different Ages for the Fifty-Five Years, 1891–1945 and for 1946.

Ages	1891–1945			1946		
	Cases	Deaths	* Case Mortality per cent.	Cases	Deaths	* Case Mortality per cent.
Under 1 year	641	316	49·37	1	—	—
1 to 2 years	1,605	638	39·72	3	—	—
2 to 3 ,, ...	2,430	651	26·80	10	1	10·00
3 to 4 ,, ...	3,158	659	20·86	10	—	—
4 to 5 ,, ...	3,572	589	16·50	15	3	20·00
5 to 6 ,, ...	3,867	517	13·36	21	1	4·76
6 to 7 ,, ...	3,333	347	10·31	22	1	4·55
7 to 8 ,, ...	2,661	248	9·32	20	2	10·00
8 to 9 ,, ...	2,205	198	8·98	18	—	—
9 to 10 ,, ...	1,661	137	8·25	18	3	16·67
10 to 15 ,, ...	5,162	202	3·91	64	—	—
15 to 20 ,, ...	2,083	59	2·83	15	—	—
20 to 25 ,, ...	1,228	28	2·28	15	—	—
25 to 35 ,, ...	1,371	28	2·05	22	—	—
35 to 45 ,, ...	564	1	0·18	2	—	—
45 and over	288	26	9·03	3	—	—
All ages	35,829	4,644	13·00	259	11	4·25

* The percentages in this column are the actual proportions of fatal cases to true cases at those ages. " Carriers " are excluded.

The case mortality rate at all ages since 1937 has been as follows :—

1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
6·08	4·19	4·63	6·06	5·84	4·58	3·16	2·26	4·63	4·25

TABLE III.

Diphtheria, 1946—Cases in Wards, with Attack Rate, Case Mortality, and Removals to Hospital per cent.

Wards	Cases	Deaths	Attack Rate per 1,000 Living	Case Mortality per cent.	Removals to Hospital per cent.
City	**259**	**11**	**·39**	**4·25**	**98**
All Saints'	8	—	·64	—	88
Ardwick	4	—	·23	—	100
Beswick	6	—	·29	—	100
Blackley	7	—	·26	—	100
Bradford	18	2	·73	11·11	94
Cheetham	4	—	·19	—	100
Chorlton-cum-H.	4	—	·10	—	100
Collegiate Church	8	—	1·01	—	100
Collyhurst	4	—	·33	—	100
Crumpsall	5	—	·21	—	100
Didsbury	10	—	·33	—	80
Exchange	—	—	—	—	—
Gorton North . .	6	—	·28	—	100
Gorton South . .	14	—	·55	—	100
Harpurhey	7	1	·39	14·29	100
Levenshulme . .	1	—	·05	—	100
Longsight	5	—	·20	—	100
Medlock Street . .	6	1	·40	16·67	100
Miles Platting . .	8	1	·56	12·50	100
Moston	5	—	·18	—	100
Moss Side East . .	4	—	·25	—	100
Moss Side West . .	11	—	·59	—	100
New Cross	19	2	1·54	10·53	100
Newton Heath . .	4	—	·20	—	100
Openshaw	7	1	·39	14·29	100
Oxford	—	—	—	—	—
Rusholme	3	—	·15	—	100
St. Ann's	—	—	—	—	—
St. Clement's . .	—	—	—	—	—
St. George's . .	7	—	·45	—	100
St. John's	—	—	—	—	—
St. Luke's	13	2	·66	15·38	100
St. Mark's	37	—	1·96	—	100
St. Michael's . .	11	1	·98	9·09	100
Withington . .	5	—	·10	—	100
Wythenshawe . .	8	—	·19	—	100

Immunisation against Diphtheria.

During the year 11,497 persons received a complete course of diphtheria prophylactic injections. 577 others received an incomplete course. The numbers were distributed as follows :—

TABLE A.

Number of Persons dealt with in Manchester in 1946.

	Numbers having received complete course of prophylactic	Numbers having received incomplete course of prophylactic
School Clinics	295	25
Child Welfare Centres	5,900	117
Day Nurseries	444	11
Hospitals	299	102
Public Health Office	125	21
Mobile Unit	4,234	298
General Practitioners	200	3
Totals	11,497	577

During 1946, a Mobile Unit visited the areas of the City in which the percentage of immunised children under 5 years of age was low and areas situated at a distance from the Child Welfare Centres and Day Nurseries. This Unit was responsible for the complete immunisation of 4,234 children.

Alum Precipitated Toxoid in two doses of 0·2 c.c. and 0·5 c.c. with a 4 weeks interval is used for the majority of children under 8 years who have the treatment carried out at the welfare centres, mobile immunisation unit, and at the public health centre. Children aged 8—15 years receive A.P.T. in two doses of 0·2 c.c. and 0·3 c.c., while persons over 15 years receive 3 injections of T.A.F.

Two prophylactics—T.A.F. and A.P.T.—are in use at the hospitals. T.A.F. and A.P.T. is supplied free to general medical practitioners in the City.

TABLE B.

Prophylactics Used in Immunising Pre-School and School Children.

Age Group	Number having received a full couse of injections	Prophylactic Used	
		T.A.F.	A.P.T.
Under 5 years	9,904	4	9,900
5—14 years	1,438	—	1,436
Totals—Under 15 years	11,342	4	11,336

Although Schick testing is not practised as a routine in connection with the greater part of the scheme, 418 primary tests were performed during the year. 96 gave a positive result and 322 were negative. These were carried out largely among hospital patients and staff, as were the 277 posterior tests which gave 5 positive and 272 negative results.

The following table illustrates the progress of the immunisation scheme since its inception :—

Illustrating the progress of the immunisation scheme since its inception.
Number of Persons, in Age Groups, having had Full Course of Injections.

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	
Under 1 year	20	162	248	212	598	595	691	963	822	1071	915	740	503	1497	1761	2298	1767	2383	2540	Total under 5 years at end of 1946. 31130
1 year ..	50	269	313	331	813	743	805	1219	1328	1169	1228	965	912	1882	2411	3557	2927	4379	4202	
2 years ..	54	226	197	254	579	613	788	1033	863	890	894	576	409	1295	1292	1567	342	1258	1517	
3 ,, ..	44	221	202	206	482	733	668	1146	782	901	824	476	272	1065	1140	1504	168	554	1045	
4 ,, ..	33	238	164	210	458	744	664	1333	801	906	856	475	238	1057	920	1710	145	342	600	
5 ,, ..	36	269	152	208	473	921	997	1256	702	951	866	464	192	1226	473	1747	182	264	333	Total 5–10 years. 32444
6 ,, ..	30	281	127	186	406	1015	987	1309	772	972	878	447	222	1241	379	2165	199	233	269	
7 ,, ..	17	291	105	137	365	1002	1076	1242	751	890	832	382	195	1215	236	1577	206	139	215	
8 ,, ..	20	281	82	131	336	876	1415	1150	810	857	711	408	179	1137	176	931	106	101	189	
9 ,, ..	21	230	65	107	282	852	1301	1241	804	678	583	336	162	1036	112	805	98	68	143	
10 ,, ..	7	63	62	98	231	711	1376	1002	923	698	613	308	137	1050	117	864	97	87	86	Total 10–15 years. 38266
11 ,, ..	10	39	46	62	247	486	1061	907	703	459	444	274	86	933	121	595	72	71	89	
12 ,, ..	7	42	29	36	266	345	630	825	772	419	395	218	43	1038	131	465	32	67	61	
13 ,, ..	6	21	22	33	119	280	438	820	615	424	396	259	39	502	100	436	33	50	36	
14 ,, ..	—	4	15	22	48	76	247	191	96	117	79	49	11	219	53	51	12	14	17	
15 years and over..	7	41	39	48	121	67	371	1201	917	444	240	102	105	309	221	298	139	210	155	Total 15 years & over 72095
Totals 1928-46	362	2678	1868	2281	5824	10059	13515	16838	12461	11846	10754	6479	3705	16702	9643	20570	6525	10220	11497	173935

The totals at the end of 1946 indicate only approximately the immune population, since no account is taken of any deaths that may have ensued amongst the immunised children.

TYPHOID AND PARATYPHOID FEVER.

28 notifications were received, the diagnosis being subsequently corrected in 10 cases. Thus 18 cases occurred, and of these 7 were infected by B. typhosus and 11 by B. paratyphosus. One death from typhoid fever occurred in a business man aged 22 years who returned home to Manchester from a visit to the Middle East and was ill on arrival in this country. Of the remaining 6 cases of typhoid fever, two females aged 6 years and 31 years contracted the disease whilst on holiday in Aberystwyth. In addition to the cases notified, two Manchester children admitted into a hospital outside the City were found to be suffering from paratyphoid fever and subsequently transferred to the isolation hospital in Manchester.

20 specimens of blood were submitted to the laboratory by medical practitioners from patients with illness simulating typhoid and none gave positive widal reactions.

Two female carriers who have persistently excreted typhoid bacilli remain under observation. No spread from these carriers have occurred over the years.

CEREBRO-SPINAL FEVER.

61 notifications were received during the year and 34 of these were admitted to Monsall Hospital, while 27 were treated in other hospitals in the City. Of those admitted to Monsall Hospital, the diagnosis was confirmed in 8 cases, and of the remaining 27, notifications were amended in 2 instances, making a total of 33 confirmed cases of cerebo-spinal fever.

There were 8 deaths from this disease, giving a case mortality rate of 24·2, which compares with a rate of 20·5 per cent. in 1945.

As regards seasonal prevalence, 11 cases occurred in the first quarter of the year, 9 in the second, 7 in the third, and 6 in the last quarter.

Cases of Cerebro-Spinal Fever in Age Groups and Sexes, 1946.

Age Groups	No. of Cases Males	No. of Cases Females	Total
0— 5 years	12	6	18
5—10 ,,	2	—	2
10—15 ,,	1	2	3
15—20 ,,	1	1	2
20—25 ,,	1	1	2
25—35 ,,	1	1	2
35 and over	3	1	4
All ages	21	12	33

POLIOMYELITIS.

Particulars of notified cases of poliomyelitis for 1946 are given in the following table :—

Sex	Age	Ward	Onset	Notified	Paralysis	Result—Jan., 1947
M	31	Longsight	23rd April	29th April	Both legs	Massage treatment
F	3	Openshaw	19th July	24th July	Weakness in legs	Satisfactory progress
M	22	Chorlton-c.-Hardy	31st Aug.	4th Sept.	Do.	Left Manchester.
M	19	All Saints	2nd Oct.	6th Oct.	Both arms	Do.
F	17	Withington	30th Oct.	5th Nov.		Do.
M	5	Longsight	15th Nov.	21st Nov.		Still in hospital

ENCEPHALITIS LETHARGICA.

No new cases of acute encephalitis lethargica were notified in 1946.

14 deaths were registered in which chronic encephalitis lethargica was declared to be a contributory cause. For the most part these occurred amongst persons who had not previously been notified as suffering from the disease.

MEASLES AND GERMAN MEASLES.

Cases notified	1946				
	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
EASLES—					
By Doctors	102	474	647	2,192	3,415
,, Others	9	52	124	200	385
Total	111	526	771	2,392	3,800
ERMAN MEASLES—					
By Doctors	47	97	66	103	313
,, Others	8	6	13	11	38
Total	55	103	79	114	351

WHOOPING COUGH.

Whooping Cough became compulsorily notifiable in October, 1939. Before this date the source of notification was solely from the schools.

Whooping cough notifications during 1946 :—

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
1946	620	764	568	313	2,265

Incidence of Whooping Cough in Manchester during the Year 1946 at Age Periods 0—5 and 5 Years and over.

Disease	Under 5 years	5 years and over	Total
Whooping Cough	1,850	415	2,265

MALARIA.

9 notifications were received, all of which related to Servicemen infected abroad.

ANTHRAX.

No case of anthrax came to the notice of the Department.

DYSENTERY.

226 notifications of dysentery were received, of which 167 were confirmed as relating to true cases, 2 deaths occurred.

Of the 167 cases, 135 proved to be associated with the presence of bacilli of the Sonne type, 12 with other specific organisms, and the remainder were diagnosed on clinical grounds alone.

PNEUMONIA.

Acute primary and influenzal pneumonia are notifiable, though many cases are only revealed through the death returns.

During 1946 the following notifications of pneumonia were received, 1,040 :—

Primary Pneumonia	Lobar	661	1,040
	Lobular	228	
	Unclassified	37	
Influenzal Pneumonia		114	

There were 442 deaths consisting of 123 lobar, 256 lobular, 20 unclassified, and 43 influenzal. Of these totals 347, consisting of 175 lobar, 130 lobular, 19 unclassified, and 23 influenzal were brought to the notice of the department through the death returns.

In addition there were 35 cases of secondary pneumonia. Thus the total number of known pneumonia cases for the year was 1,422.

Total primary notified	926
Total primary per death returns	324
Total primary	1,250
Total influenzal notified	114
Total influenzal per death returns	23
	1,387
Total secondary	35
Total all types	1,422

Primary Pneumonia.

Of the 1,250 cases of primary pneumonia 836 were classified as lobar, 358 as lobular and 56 simply as pneumonia. The number of cases investigated by the Health Visitors was 1,126.

Secondary Pneumonia.

Secondary pneumonia is not notifiable, but the attention of the department has been directed to 35 cases during the year. On investigation 23 cases were found to be associated with the following diseases:—

Whooping Cough	16
Measles	6
Chicken Pox	1
	23

All the patients were children under five years of age.

Influenzal Pneumonia.

114 cases of influenzal pneumonia were notified and 23 discovered through the death returns, a total of 137 cases.

Of all the cases of pneumonia known to the department in 1946, 714 were transferred to hospital and of those nursed at home, 33 were attended by nurses supplied by the Manchester and Salford District Nursing Institution.

BACTERIOLOGICAL EXAMINATIONS MADE FOR THE CITY OF MANCHESTER DURING 1946 BY THE PUBLIC HEALTH LABORATORY, UNIVERSITY OF MANCHESTER.

Month	Diphtheria		Typhoid	Tuberculosis				Water	
				Sputum		Milk		Bacteriological	Chemical
	Total	+	Total	Total	+	Total	+	Total	Total
January	333	27	4	90	9	15	—	3	4
February	319	41	2	140	10	33	2	3	3
March	455	41	2	337	45	40	2	18	2
April	474	52	3	450	58	30	1	8	8
May	389	39	6	278	38	41	5	4	4
June	327	19	—	142	10	37	6	21	5
July	382	25	6	149	16	49	8	12	8
August	268	6	26	193	33	84	7	12	3
September	317	28	16	83	4	86	1	7	3
October	512	26	18	106	7	50	4	9	9
November	392	13	10	213	33	97	5	8	8
December	276	6	1 (VI test, 213 Water Works)	79	11	33	3	22	5
Total	4,444	323	307	2,260	274	595	44	127	62

Total specimens enumerated above, 7,795. Other investigations, 1,587. as under :—

Milks—Coli, etc.	636
,, Chemical examinations	13
,, Reduction test and coli	108
,, Reduction test only	224
Diphtheria—Virulence tests	115
Swabs—For haemolytic streptococci	87
,, Vincent's angina	31
Inoculation tests	28
Cerebro-spinal fluid, various tests	18
Cultivation tests	51
Ice cream and food	124
Blood, Paul Bunnell test	7
Malaria	8
Faeces and urine, for typhoid, dysentery, etc.	132
A.P.T.	5
	1,587

TUBERCULOSIS.

By Dr. D. P. Sutherland, Senior Tuberculosis Officer.

Staff.

Full time—

D. P Sutherland, M.B., B.S.(Lond.)	Senior Tuberculosis Officer
W. Lee, M.B., CH.B.	First Assistant Tuberculosis Officer.
R. Walshaw, M.B.,CH.B., D.P.H.	Assistant Tuberculosis Officer and Assistant Medical Officer for Mass Radiography
D. S. Hayes, M.R.C.S., L.R.C.P.	Assistant Tuberculosis Officer.
C. Verity, B.SC., M.B., CH.B., D.P.H.	Assistant Tuberculosis Officer.
C. Anderton	Chief Clerk.
Inspectors	2
Nurses	14
Radiographers (3), pharmacist (1), clerks, etc. (28)	32

In the report for 1945 attention was directed to the increase in the number of cases of Pulmonary Tuberculosis which had occurred. During the war years the numbers fluctuated considerably, but the total result was an addition to the register of 72 cases.

The new cases notified in 1946 were considerably less than in any previous year, being 885, and it is gratifying to record that the deaths, which numbered 460, also constituted a new low figure record. There has been no improvement in the institutional accommodation, which remains insufficient for the number of cases requiring this form of treatment, and a long waiting list still obtains. The shortage of nursing and domestic staff shows no sign of being overcome and is particularly noticeable in the larger institutions.

Notification.

Pulmonary Tuberculosis.

In the case of males there was an increase in notification in the 5—9 age group. It has been noted that in alternate years this occurs and is balanced by a diminution of numbers notified in the intermediate years. Also in the 20—34 age groups there is a repetition of the increased notifications which occurred in 1945. It is found on analysis of the cases that 44 per cent. of these newly notified patients were from the services, and this may be accounted for by the more general use of radiographic examinations as a routine procedure. A large number of these cases are of a minimal type.

The remaining age groups do not show any significant feature other than a preponderating diminution in the numbers notified—the total reduction being 21.

In the case of females the large decrease in notification occurs in all the age groups, with the insignificant exception of a slight increase in the 5—9 class. It is to be noted that the total reduction compared with 1945 was 76.

Non-Pulmonary Tuberculosis.

In this group there is a decrease in the total number of new cases. The figures are 104 in 1946 as against 108 in 1945 for males, and 85 as against 116 for females, the chief reduction being amongst females, as in the pulmonary cases.

Mortality.

Pulmonary Tuberculosis.

There has been a diminution of 36 in the number of deaths which, as previously indicated, constitutes a new low record for the City, namely 460. The reduction is seen at all ages and occurred chiefly amongst females.

Non-Pulmonary Tuberculosis.

The deaths in this group numbered 67—a reduction of 14 as compared with 1945. In this class of case there was a slight increase of 8 in the number of female deaths and a diminution of 22 in the male deaths.

Maintenance Allowances under Memorandum 266/T.

Memorandum 266/T was introduced originally as a war-time measure, but it is still in being and is regarded as an integral part of the Tuberculosis Service.

During this year 782 patients were granted allowances which, in total, amounted to £27,154.

The Ministry of Health recognises the unique position of the tuberculous patient, and his or her immediate family, and the necessity for an adequate standard of living in the interest of both the patient and the general public health. Due regard will be paid to this when the new scheme of Social Service is started and a higher level of benefit will probably be provided for the tuberculous patient. Heretofore the chronic case has not been eligible for allowances but this anomaly should be rectified.

It must be emphasised that any special provisions for the tuberculous should be conditional on the patient accepting the treatment offered to him to enable him to recover.

Rehabilitation.

In the report for 1945 attention was directed to the plans for rehabilitation and the measures to be adopted by the Government to implement recommendations which have been made from 1913 onwards.

A meeting with the District Rehabilitation Officers of the Ministry of Labour was held at the Tuberculosis Clinic and the full scheme of treatment, prevention, follow up and care work was explained to them. They were also taken to the Baguley Sanatorium and shown the practical application of graded work (in the special workshops) which is associated with and follows the remedial measures carried out there.

A scheme was inaugurated in co-operation with the Ministry whereby a specially detailed report, Form D.P.1 (X) was to be completed for the Ministry by the Tuberculosis Officer in respect of tuberculous patients who might be rehabilitated in industry, provided work suitable to their physical condition could be secured.

At the time of writing (August, 1947) over 200 such reports have been sent to the Ministry and, according to their returns, 75 patients were placed in employment fitted to their physical capacity and are, so far as is known, still so employed at present, with the exception of 7 cases.

The knowledge gained is being usefully applied in the placing of our patients and arrangements are being made with the Ministry of Labour for more personal interviews to take place at the Tuberculosis Clinic, where the medical advice of the Tuberculosis Officer will be allied with the more practical experience of facilities and available jobs possessed by the District Rehabilitation Officers.

It is intended at a later date that the Ministry of Labour shall establish special factories where patients unsuited to general industry may be employed with safety.

The calls on the Care Committee's fund amount to £800 per annum and it still serves a very useful purpose in meeting demands which are not covered by any other source.

Attendances at the Clinic.

The total number of attendances at the clinic was 33,448, an increase of 2,791 over the figures for 1945.

Examinations carried out for Medical Board Purposes.

The continuing recruitment for the Forces, though diminished in volume, still adds materially to the work of the medical staff. The following table shows the extent to which the Ministry of Labour has used the facilities at the Clinic for obtaining expert opinion on the suitability of those called up in connection with service in His Majesty's Forces.

(1) Year	(2) Number reported upon	(3) Without a previous record at Tuberculosis Clinic	(4) X-ray Examinations of (3)	(5) Total X-ray Examinations	(6) Diagnosis	
					Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis
1939	11	5	5	5	—	—
1940	340	212	182	188	7	—
1941	444	243	236	337	10	1
1942	406	244	240	349	4	—
1943	419	273	272	384	5	1
1944	323	221	219	288	3	—
1945	271	201	200	255	3	1
1946	183	113	112	164	—	—
Totals ..	2,397	1,512	1,466	1,970	32	3

Mass Miniature Radiography Scheme.

As it has not been so far found practicable to provide a fixed centre for its operation, the X-ray Unit has continued to be used as a transportable apparatus. Meanwhile, having regard to the value of this work, arrangements are well in hand to secure a second unit for use in the Clinic. Existing accommodation and the installation for processing the films are being adapted for the purpose and the present staff (with slight modification) will be available for operating this additional service.

Throughout the year the mobile unit has been operation in various works and public undertakings where facilities have been offered. In consequence of the absence of a fixed centre, several of the smaller groups of volunteers on our waiting list have been visited during the surveys for the year. This, of necessity, entails some loss of working time owing to more frequent moving of the unit, and has resulted in a smaller number of examinations than in the previous year. The co-operation of both managements and staffs has again been satisfactory.

A summary of the findings at the examinations conducted during the year is appended.

	Males	Females	Total
Total radiographed	9,295	5,658	14,953
Total " passed " on miniature film ..	8,621	5,353	13,974=93·45 per cent.
Total recalled for full-size film	674	305	979= 6·55 per cent.
Total recalled for medical interview ..	341	146	487= 3·26 per cent.

Those who were passed on the miniature film required no further action. The 979 who were recalled for a full-size film were those whose miniature film suggested some abnormality which was considered to require further investigation. An analysis of these is given in the following table.

In the tables prepared under the Ministry of Health classifications it will be noticed that a larger number of cases appear under the headings, 1, 11, and 21, as classified on miniature film. This is due to the fact that further experience has enabled this discrimination, and without resorting to the recall of individuals for the purpose of taking full-size films.

Ministry of Health Classification Number	Title	Classified on miniature (35 m.m.) film (No further action)			Recalls for full-size film: Not followed by recall for medical interview or clinical examination (No further action)			Recalls for full-size film: Followed by recall for medical interview and clinical examination (analysis appended)			Totals
		Males	Females	Total	Males	Females	Total	Males	Females	Total	
1	Congenital abnormalities of bony thorax and lungs	33	25	58	4	5	9	3	—	3	70
2	Chronic bronchitis and emphysema	1	—	1	—	—	—	33	2	35	36
3	Pneumonia, lobar	—	—	—	—	—	—	2	—	2	2
4	Broncho-pneumonia (non-tuberculous) (including primary atypical)	—	—	—	—	—	—	—	—	—	—
5	Consolidation of unknown origin	—	—	—	—	—	—	1	—	1	1
6	Bronchiectasis	—	—	—	—	—	—	27	4	31	31
7	Pulmonary fibrosis (non-tuberculous, *e.g.*, post-pneumonic)	—	—	—	—	—	—	3	3	6	6
8	Pneumokoniosis (Silicosis, asbestosis, coalminer's pneumokoniosis)	—	—	—	—	—	—	3	—	3	3
9	Pneumokoniosis accompanied by Tuberculosis	—	—	—	—	—	—	—	—	—	—
10	Basal fibrosis (*e.g.*, obliterated costo-phrenic angle and diaphragmatic tenting	15	3	18	4	—	4	—	—	—	22
11	Pleural thickening	153	15	168	32	3	35	6	5	11	214
12	Pleural and interlobar effusion (non-tuberculous)	—	—	—	—	—	—	—	—	—	—
13	Spontaneous pneumothorax (non-tuberculous)	—	—	—	—	—	—	—	—	—	—
14	Intrathoracic new growth (Mediastinal, pulmonary, bronchial, and pleural, primary and secondary, both benign and malignant)	—	—	—	—	—	—	12	3	15	15
15	Cardio-vascular lesions—congenital	1	—	1	1	—	1	—	1	1	3
16	Cardio-vascular lesions—acquired	—	—	—	—	—	—	50	44	94	94
17	Miscellaneous (including acquired conditions of ribs, abnormalities of the diaphragm, dextrocardia, dextrocardia with transposition of viscera, pulmonary mycosis, mediastinal effusions)	1	—	1	6	1	7	3	2	5	13
18	Missing repeat 35 m.m. films	4	4	8	—	—	—	—	—	—	8
19	Missing large films, *i.e.*, failed to attend	—	—	—	19	15	34	—	—	—	34
20	Tuberculosis, active primary lesions, including epi-tuberculosis :—										
	(*a*) With symptoms	—	—	—	—	—	—	—	—	—	—
	(*b*) Without symptoms	—	—	—	—	—	—	—	—	—	—
21	Tuberculosis—inactive primary lesions (*e.g.*, Ghon's focus and/or calcified gland	66	42	108	22	8	30	2	1	3	141
22	Tuberculosis—active, post-primary—unilateral :—										
	(*a*) With symptoms — Previously known	—	—	—	—	—	—	1	—	1	1
	(*a*) With symptoms — Newly discovered	—	—	—	—	—	—	9	8	17	17
	(*b*) Without symptoms — Previously known	—	—	—	—	—	—	—	—	—	—
	(*b*) Without symptoms — Newly discovered	—	—	—	—	—	—	—	4	4	4
23	Tuberculosis—active, post-primary—bilateral :—										
	(*a*) With symptoms — Previously known	—	—	—	—	—	—	1	—	1	1
	(*a*) With symptoms — Newly discovered	—	—	—	—	—	—	14	4	18	18
	(*b*) Without symptoms — Previously known	—	—	—	—	—	—	1	—	1	1
	(*b*) Without symptoms — Newly discovered	—	—	—	—	—	—	—	1	1	1
24	Tuberculosis—inactive, post-primary :—										
	(*a*) Previously known cases	—	—	—	—	—	—	10	6	16	16
	(*b*) Previously unknown cases	5	1	6	81	33	114	96	32	128	248
—	Tuberculosis—doubtfully active—still under observation	—	—	—	—	—	—	24	5	29	29
25	Tuberculosis—pleural effusion	—	—	—	—	—	—	—	—	—	—
26	Tuberculosis—spontaneous pneumothorax and hydropneumothorax	—	—	—	—	—	—	—	—	—	—
30	Abscess of lung	—	—	—	—	—	—	—	—	—	—
—	Passed as " Normal "	8,342	5,263	13,605	164	94	258	32	15	47	13,910
—	Failed to attend for clinical interview	—	—	—	—	—	—	8	6	14	14
	Totals	8,621	5,353	13,974	333	159	492	341	146	487	14,953

1946.

An analysis of the 219 cases of pulmonary tuberculosis recalled for clinical examination and interview by the Radiography Unit Medical Officer shows that :—

(*a*) In 43 instances (= ·29 per cent. of all examinations) the disease was regarded as active, 3 being previously known cases.

The remaining 40 (= ·27 per cent. of all examinations) were newly discovered cases, of whom 39 were advised to attend their private medical practitioners with a view to reference to the appropriate Tuberculosis authority. With the consent of the person concerned, a special letter was sent in every instance to the practitioner, giving particulars of the clinical and radiological findings, and asking that the case be referred. Only one of the 40 was unwilling for this, and in consequence, no further action could be taken.

Of the 39 so advised, 34 attended at Tuberculosis Clinics, 29 being recommended for institutional treatment. 25 availed themselves of this recommendation, but 4 declined and were, therefore, placed under supervision at the Clinics. 5 were not considered to require institutional care and were advised to keep under supervision at the Clinics. The remaining 5 failed to avail themselves of the advice in regard to attendance at the Tuberculosis Clinics.

In every such instance an attempt is made to secure the individual's compliance by means of a subsequent special communication from the Tuberculosis Officer to the medical practitioner reminding him of the case and offering, if the practitioner so wishes, directly to get in touch with the person concerned. Any further action depends upon the reply received, as any attempt at coercing the public would be resented and would be contrary to the voluntary basis upon which the Mass Miniature Radiography Scheme is established.

Sputum was positive for tubercle bacilli in 13 instances, all of whom attended at Tuberculosis Clinics. 11 were recommended for, and accepted, treatment in sanatorium and 2 for supervision at the Clinics.

(*b*) In 147 instances (= ·98 per cent. of all examinations) the disease was regarded as inactive, 16 being previously known cases. 32 were regarded as inactive after the initial clinical examination by the Unit Medical Officer, and 105 (= ·70 per cent. of all examinations) following further observation at the Tuberculosis Clinics. The remaining 10 failed to avail themselves of the advice given relative to their attendance for observation. The method adopted to secure their attendance is precisely as that outlined in (*a*) above.

(*c*) In 29 instances the activity of the disease was regarded as being doubtful and attendance at the Tuberculosis Clinics for observation was advised in the manner previously mentioned. In all such instances decisions will be notified to the Radiography Unit by the Tuberculosis Officers as, and when, they are made.

In the cases of other various diseases and abnormalities where, after the initial clinical examination by the Unit Medical Officers, treatment was considered to be indicated, the individual was advised to consult his private medical practitioner to whom was sent, with the patient's consent, a full report on the clinical and radiological findings.

Housing.

The department continues its activities in making special enquiries into the housing conditions of families in which tuberculosis has occurred with a view to securing improved accommodation by removal to Corporation houses.

Careful consideration is given to the home circumstances in relation both to the suitability of the conditions under which the patient is living and the possibility of family infection.

Well over 1,000 detailed housing reports have been made, each of which has received careful scrutiny to decide whether the family should be recommended for special preference in securing Corporation tenancy.

382 such special recommendations have been made and 235 of these have secured Corporation houses. Of the remaining 147 families, in 69 instances they were successful in obtaining other suitable alternative accommodation themselves, and the balance of 78 families is accounted for by removals out of the Manchester area, etc.

With the present shortage of material and labour it is not to be expected that patients can be rehoused by the Corporation with the same facility as in normal years, but it is pleasing to record that so far as circumstances permit, the Housing Department give a high degree of priority to families recommended for it on the grounds of tuberculosis.

The statistics for the year are set out in the following tables :—

TABLE 1.

Comparative Figures.

Rates per Thousand of the Population.

	1934—38 (Mean rate)	1939	1940	1941	1942	1943	1944	1945	1946
DEATH RATES—									
General	13·27	13·39	17·98	16·64	14·72	15·50	14·20	14·41	13·52
All respiratory diseases (except tuberculosis) ..	1·69	1·30	4·00	2·81	2·13	2·64	2·04	2·33	2·09
Tuberculosis (all forms) ..	1·07	1·00	1·24	1·32	1·12	1·07	0·91	0·93	0·79
Phthisis, both sexes	0·93	0·86	1·09	1·39	0·99	0·91	0·80	0·80	0·69
,, males only ..	1·19	1·10	1·43	1·45	1·23	1·14	0·95	1·00	0·92
,, females only ..	0·69	0·64	0·78	0·84	0·76	0·71	0·66	0·62	0·48
Non-pulmonary tuberculosis (both sexes) ..	0·15	0·14	0·15	0·19	0·13	0·16	0·11	0·13	0·10
TUBERCULOSIS NOTIFICATION RATES—									
All forms	1·79	1·71	2·04	2·17	1·99	2·08	1·88	1·93	1·60
Pulmonary only	1·36	1·30	1·63	1·72	1·57	1·60	1·50	1·57	1·32
Non-pulmonary only ..	0·43	0·41	0·42	0·45	0·42	0·48	0·38	0·36	0·28

TABLE 2.

New Cases and Deaths during 1946.

Age Periods	New Cases				Deaths			
	Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmonary	
	M.	F.	M.	F.	M.	F.	M.	F.
0 —	4	2	4	3	3	—	4	5
1 —	6	6	20	11	—	—	5	9
5 —	26	19	31	16	1	2	4	6
15 —	299	286	42	43	109	123	9	13
45 —	165	37	6	7	136	35	3	8
65 — and upwards ..	30	5	1	5	41	10	1	—
Totals ..	530	355	104	85	290	170	26	41

The number of non-notified deaths from pulmonary tuberculosis was 24=5·22 per cent.

The number of non-notified deaths from non-pulmonary tuberculosis was 4=5·97 per cent., but it is to be noted that 3 of the 4 cases were certified as cases of tubercular meningitis. These cases as a rule have a very short illness and diagnosis is frequently in doubt during life.

The percentage of non-notified deaths from all forms of tuberculosis was 5·31.

There were, in addition, 8 deaths of non-notified cases outside Manchester which were adjudged by the Registrar-General to be properly referable to this area.

TABLE 3.

Primary Notifications and Deaths from Pulmonary Tuberculosis, 1917-1946.

(Manchester figures—52 weeks)

Age Groups.

Pulmonary Tuberculosis	0–	1–	5–	10–	15–	20–	25–	35–	45–	55–	65–	TOTAL Notifications	TOTAL Deaths
Notifications, 1917—1936	78	537	1408	1477	2957	3413	5615	5221	4382	2260	760	28107	
Deaths, ,, ,,	64	210	154	313	1581	2055	3379	3669	3694	2016	724		17859
Notifications, 1937	2	12	28	21	130	149	219	180	150	117	47	1055	
Deaths, ,, ...	1	6	2	2	58	77	126	128	114	100	50		664
Notifications, 1938	6	8	27	30	116	146	192	152	134	104	32	947	
Deaths, ,, ...	1	3	2	7	46	78	128	95	126	104	30		620
Notifications, 1939	3	8	19	22	125	132	174	169	116	101	41	910	
Deaths, ,, ...	1	2	—	4	53	73	131	98	100	101	35		598
Notifications, 1940	5	5	14	21	145	136	216	171	156	98	45	1012	
Deaths ,, ...	2	2	1	5	64	56	144	149	118	91	53		685
Notifications, 1941	3	15	10	30	148	136	206	163	164	116	45	1036	
Deaths, ,, ...	—	5	4	4	63	67	125	117	121	131	65		702
Notifications, 1942	1	5	17	18	130	150	202	173	109	109	32	946	
Deaths, ,, ...	—	1	6	3	41	68	119	111	104	101	42		596
Notifications, 1943	1	11	10	21	129	157	208	169	115	102	34	957	
Deaths, ,, ...	1	1	—	4	41	57	92	106	108	102	35		547
Notifications, 1944	2	18	18	27	117	139	191	140	123	102	45	922	
Deaths, ,, ...	—	3	2	2	34	59	95	89	99	77	35		495
Notifications, 1945	3	20	10	27	119	174	206	158	133	94	38	982	
Deaths ,, ...	3	2	2	6	31	60	96	68	95	81	51		495
Notifications, 1946	6	12	24	21	79	165	216	125	131	71	35	885	
Deaths, ,, ...	4	—	2	1	23	52	87	69	96	77	48		459
Total notifications	110	651	1585	1715	4194	4897	7645	6821	5713	3274	1154	37759	
Total deaths	77	235	175	351	2035	2702	4522	4699	4775	2981	1168		23720

TABLE 4.

Primary Notifications and Deaths from Non-Pulmonary Tuberculosis, 1917-1946.

(Manchester figures—52 weeks)

Age Groups.

Non-pulmonary Tuberculosis	0–	1–	5–	10–	15–	20–	25–	35–	45–	55–	65–	Total Notifications	Total Deaths
Notifications, 1917—1936	271	1836	2123	1664	1286	771	862	514	374	226	130	10057	
Deaths, ,, ,,	333	1040	443	367	391	250	282	225	196	132	92		3751
Notifications, 1937	9	53	67	43	66	36	45	26	8	14	9	376	
Deaths, ,, ...	5	23	10	10	12	11	13	9	6	13	7		119
Notifications, 1938	10	41	51	47	42	27	39	18	15	6	7	303	
Deaths, ,, ...	8	17	13	10	8	7	12	7	12	4	7		105
Notifications, 1939	4	46	40	34	46	29	36	23	15	10	6	289	
Deaths, ,, ...	3	24	9	7	14	12	9	6	5	8	6		103
Notifications, 1940	3	29	47	30	42	27	31	18	17	10	6	260	
Deaths, ,, ...	4	17	9	2	10	7	9	5	10	4	6		83
Notifications, 1941	3	47	40	34	40	24	45	21	11	2	6	273	
Deaths, ,, ...	3	35	9	8	14	9	13	10	8	7	3		119
Notifications, 1942	2	36	35	27	42	29	33	24	16	8	3	255	
Deaths, ,, ...	4	14	5	7	9	10	10	3	1	6	6		75
Notifications, 1943	4	36	36	34	44	36	51	18	18	8	7	292	
Deaths, ,, ...	3	22	2	12	12	5	12	7	6	6	1		88
Notifications, 1944	3	34	32	15	32	36	34	25	9	12	3	235	
Deaths, ,, ...	4	13	7	5	7	5	3	6	8	4	2		64
Notifications, 1945	6	31	36	33	29	20	30	20	11	5	3	224	
Deaths, ,, ...	4	22	6	8	5	6	7	8	5	3	5		79
Notifications, 1946	7	31	24	23	25	21	27	12	8	5	6	189	
Deaths, ,, ...	8	14	5	4	4	8	8	3	8	2	1		65
Total notifications	322	2220	2531	1984	1694	1056	1233	719	502	306	186	12753	
Total deaths	379	1241	518	440	486	330	378	289	265	189	136		4651

Table 5.

Primary Notifications of Pulmonary and Non-Pulmonary Tuberculosis received from Municipal Wards during 1946.

Wards	Estimated Population	Pulmonary	Non-Pulmonary	Totals	Rate per cent. of the Population
1. Exchange	80	—	—	—	0·00
2. New Cross	12,328	24	7	31	2·51
3. St. Clement's	734	—	—	—	0·00
4. Oxford	187	2	—	2	10·70
5. St. John's	1,491	1	—	1	0·67
6. St. Ann's..	17	—	—	—	0·00
7. St. Michael's	11,213	21	3	24	2·14
8. Collyhurst	11,980	13	8	21	1·75
9. Cheetham	21,483	17	1	18	0·83
10. Collegiate Church ..	7,921	16	4	20	2·52
11. Crumpsall	23,652	22	3	25	1·06
12. Blackley	27,341	24	8	32	1·17
13. Harpurhey	17,941	17	4	21	1·17
14. Moston	28,391	24	6	30	1·06
15. Newton Heath ..	20,241	22	8	30	1·48
16. Miles Platting ..	14,171	24	2	26	1·83
17. Bradford	24,708	31	12	43	1·74
18. Beswick	20,908	21	3	24	1·15
19. Ardwick	17,455	31	9	40	2·29
20. Openshaw	17,944	31	2	33	1·84
21. St. Mark's	18,841	38	5	43	2·28
22. Longsight	24,812	24	6	30	1·21
23. All Saints'	12,516	33	7	40	3·20
24. St. Luke's	19,550	42	3	45	2·30
25. Medlock Street ..	14,973	37	11	48	3·21
26. St. George's	15,700	27	7	34	2·17
27. Moss Side East ..	16,223	31	9	40	2·47
28. Moss Side West ..	18,748	24	4	28	1·49
29. Chorlton-cum-Hardy	40,546	54	11	65	1·60
30. Didsbury	30,108	24	3	27	0·90
31. Withington	47,840	62	17	79	1·65
32. Gorton North ..	21,230	20	3	23	1·08
33. Gorton South ..	25,582	33	7	40	1·56
34. Levenshulme	19,114	20	—	20	1·05
35. Rusholme	19,553	24	4	28	1·43
36. Wythenshawe ..	43,138	49	12	61	1·15
37. Unclassified	—	2	—	2	—
Total—City of Manchester	668,660	885	189	1,074	1·60

NOTE.—In the above table the population figures are not strictly accurate being based on the last census figures (1931). Removals on account of slum clearance, war damage, etc., will have disturbed the balance, but the figures serve to give a general picture of the variation in incidence according to the character of the Ward.

It will be seen that in some of the more congested Wards, the incidence rate is almost three times as high as in the less congested areas.

TABLE 6.

Sources of Notification of Tuberculosis during 1946.

Source	Pulmonary	Non-Pulmonary	Totals
Crumpsall Hospital	64	9	73
Withington Hospital	46	6	52
Booth Hall Hospital	23	30	53
District Medical Officers	—	—	—
Manchester Royal Infirmary	22	49	71
Ancoats Hospital	25	12	37
Manchester and Salford Skin Hospital	—	6	6
St. Mary's Hospital	7	2	9
Northern Hospital	6	2	8
Victoria Memorial Jewish Hospital	1	—	1
Royal Manchester Children's Hospital, Pendlebury	5	12	17
Do. do. do. Gartside St.	1	2	3
Duchess of York Hospital for Babies	5	8	13
Manchester Hospital for Consumption	2	—	2
Mental Hospitals	14	—	14
Schools	1	2	3
Child Welfare Centres	—	1	1
H.M. Forces	96	4	100
Ministry of Pensions	13	2	15
Other Authorities	69	19	88
Private Practitioners	387	15	402
Tuberculosis Staff	87	6	93
Various Sources	11	2	13
Total	885	189	1,074

156 tenants have allowed the removal of bedding, etc., for disinfection or destruction.

51,858 cardboard boxes have been prepared in the office and supplied to patients for use as sputum boxes in the home.

257 sputum bottles have been supplied for use outside the house.

10,220 visits have been made by the Enquiry Officers during the year.

36,074 letters were sent out.

274 notices warning against spitting on floors, etc., have been supplied to offices and workshops.

TABLE 7.

Sources of Primary Notification of Non-Pulmonary Cases for the Years 1918 to 1946.

Source	1918–1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Crumpsall Hospital	362	41	20	19	24	14	17	18	9	6	9
Withington Hospital ..	345	26	32	22	19	14	20	15	10	7	6
Booth Hall Hospital	868	48	42	37	31	48	34	42	37	35	30
District Medical Officers ..	8	1	1	—	—	—	—	—	—	—	—
Manchester Royal Infirmary	1567	58	38	49	44	51	48	75	49	61	49
Ancoats Hospital	720	57	29	33	11	29	24	23	18	8	12
Manchester and Salford Skin Hospital	649	13	8	20	14	11	7	8	10	7	6
St. Mary's Hospital	186	6	7	3	7	4	2	2	3	2	2
Northern Hospital	156	—	1	4	8	4	4	2	1	2	2
Victoria Memorial Jewish Hospital	82	1	2	1	3	1	1	2	2	2	—
Royal Manchester Children's Hospital—											
Pendlebury	211	17	9	11	6	13	10	10	9	7	12
Gartside Street	585	8	12	5	9	7	2	8	4	6	2
Duchess of York Hospital for Babies	26	3	2	2	—	2	1	5	3	2	8
Mental Hospitals	37	—	—	1	1	5	2	4	2	—	—
Schools	349	3	4	2	3	2	2	2	—	—	2
Child Welfare Centre ..	5	—	—	—	—	—	1	—	—	—	1
H.M. Forces	37	—	3	1	4	7	8	13	13	8	4
Ministry of Pensions ..	—	—	—	—	—	—	4	3	3	1	2
Private Practitioners.. ..	2247	53	61	47	31	30	33	26	24	27	15
Tuberculosis Staff	254	24	9	7	18	13	12	16	11	14	6
Various Sources	560	17	23	25	27	18	23	18	27	29	21
Totals	9254	376	303	289	260	273	255	292	235	224	189

TABLE 8.

* New Cases of Pulmonary Tuberculosis Notified during the Years 1900 to 1946.

Year	Poor-law Cases	Institutions, etc.	Private Practitioners	Total
(1) 1900	578	455	540	1,573
1901	625	373	341	1,339
1902	667	305	303	1,275
1903	556	550	251	1,357
1904	512	440	250	1,202
1905	527	588	291	1,406
1906	565	510	304	1,379
1907	634	646	310	1,590
(2) 1908	659	498	346	1,503
1909	681	542	384	1,607
1910	543	760	356	1,659
(3) 1911	517	897	423	1,837
(4) 1912	488	947	969	2,404
(5) 1913	345	717	1,350	2,412
1914	483	877	1,304	2,664
1915	279	740	1,194	2,213
1916	322	817	1,410	2,549
1917	470	716	1,061	2,247
1918	268	563	1,015	1,846
1919	208	538	845	1,591
1920	206	629	672	1,507
1921	257	632	722	1,611
1922	233	567	656	1,456
1923	239	546	659	1,444
1924	223	555	731	1,509
1925	262	496	746	1,504
1926	220	422	765	1,407
1927	241	441	756	1,438
1928	253	361	824	1,438
1929	201	382	802	1,385
1930	201	377	709	1,287
	Transferred Hospitals			
1931	206	362	717	1,285
1932	202	228	657	1,087
1933	205	213	663	1,081
1934	242	197	634	1,073
1935	218	202	586	1,006
1936	208	192	575	975
1937	233	275	547	1,055
1938	249	202	496	947
1939	223	227	460	910
1940	241	275	496	1,012
1941	218	324	494	1,036
1942	179	335	432	946
1943	200	381	376	957
1944	138	408	376	922
1945	129	395	458	982
1946	133	365	387	885
Total	15,687	22,468	29,643	67,798

* This table does not include 425 cases notified in 1899.

(1). Voluntary notification of Pulmonary Tuberculosis—Manchester Scheme.
(2). Compulsory notification (Tuberculosis Regulations) from Poor Law Institutions.
(3). Compulsory notification from voluntary institutions.
(4). Compulsory notification of Pulmonary Tuberculosis by all practitioners.
(5). Compulsory notification of all forms of Tuberculosis.

TABLE 9.

New Cases of Non-Pulmonary Tuberculosis Notified during the Years 1913—1946.

Year	Males	Females	Total
1913	759	714	1,473
1914	519	413	932
1915	422	415	837
1916	418	467	885
1917	433	449	882
1918	345	353	698
1919	206	228	434
1920	280	257	537
1921	295	281	576
1922	321	284	605
1923	350	380	730
1924	316	307	623
1925	322	300	622
1926	239	224	463
1927	277	226	503
1928	214	276	490
1929	204	171	375
1930	251	215	466
1931	259	237	496
1932	201	201	402
1933	154	159	313
1934	170	143	313
1935	146	161	307
1936	154	147	301
1937	184	192	376
1938	154	149	303
1939	143	146	289
1940	129	131	260
1941	135	138	273
1942	118	137	255
1943	127	165	292
1944	110	125	235
1945	108	116	224
1946	104	85	189
Total	8,567	8,392	16,959

TABLE 10.

Tuberculosis (Non-Pulmonary)—Primary Cases Notified during 1946.—Age Groups and Site.

Location of Disease	AGE GROUPS																				Totals	
	0—		5—		10—		15—		20—		25—		35—		45—		55—		65—			
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Brain :—Tumour	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Meninges	7	8	1	2	3	2	1	1	—	1	—	—	—	—	—	—	—	—	—	—	12	14
Hydrocephalus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Glands :—Cervical	6	—	9	2	5	1	—	5	—	2	3	2	—	3	—	2	1	—	—	2	24	19
Mesenteric	—	1	3	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	4	2
Axillary	—	—	—	—	—	—	—	—	—	—	2	—	—	1	—	1	—	—	—	1	2	3
Inguinal	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
Tuberculous Peritonitis	—	1	—	—	1	1	—	2	2	—	—	1	—	—	—	2	—	—	—	—	3	7
Tuberculosis of Abdomen	2	1	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	2	3
,, of Breast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
,, of Intestines	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	1	1
Joints :—Spine	2	1	2	—	—	1	3	3	4	2	2	1	—	2	—	—	—	1	—	2	13	13
Hip	—	—	2	1	2	1	2	—	1	—	1	—	—	—	1	—	—	—	1	—	10	2
Elbow	—	—	—	—	—	—	—	—	—	—	2	—	1	—	—	—	—	—	—	—	3	—
Ankle	1	—	1	1	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	4	1
Wrist	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Shoulder	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Knee	1	1	—	—	1	1	2	—	—	—	1	2	—	—	—	—	—	—	—	—	5	4
Bones :—Various	1	—	—	—	—	2	2	—	1	—	1	1	—	1	1	—	—	—	—	—	6	4
Tuberculosis of Skin	—	—	—	—	—	1	—	—	—	1	1	3	1	—	—	—	—	—	—	—	2	5
General Tuberculosis	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1
Special Organs :—Ear	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bladder, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kidney	—	—	—	—	—	—	—	1	1	—	—	1	—	—	—	—	—	—	—	—	1	2
Testicle, etc.	—	—	—	—	—	—	—	—	—	—	1	—	2	—	—	—	1	—	—	—	4	—
Muscles, etc.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rectum	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Uterus	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	2
Unclassified	1	—	—	—	1	—	—	—	2	—	—	1	—	—	1	—	—	—	—	—	5	1
Totals	24	14	18	6	13	10	12	13	11	10	14	13	5	7	3	5	3	2	1	5	104	85

TABLE 11.—Various Statistics Relating to the Notification of Tuberculosis.

	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1914 to 1932	1899 Sept. 1st to 1913 Dec. 31st	Total
Cases Visited and Registered—																*Phthisis* only	
Males	657	661	632	669	671	793	771	674	716	818	703	738	836	804	25842	14170	50155
Females	464	550	532	599	553	539	541	544	561	630	586	584	598	622	19937	8854	36694
Totals	1121	1211	1164	1268	1224	1332	1312	1218	1277	1448	1289	1322	1434	1426	45779	23024	86849
Houses Disinfected—																	
1. By Corporation—																	
(*a*) With solution of chlorinated lime only	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15582	9015	24597
(*b*) With lime solution only ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	126	126
(*c*) By Esmarch's method and solution of chlorinated lime	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12643	17232	29875
(*d*) † By fumigating lamp	797	982	1223	1321	1395	1582	1837	1983	2107	2180	2361	2608	2866	2952	18803	—	44997
Totals	797	982	1223	1321	1395	1582	1837	1983	2107	2180	2361	2608	2866	2952	47028	26373	99595
2. By Tenants— Esmarch's method of chlorinated lime, etc.	3077	3584	4834	5275	4374	3571	4170	4283	4473	4583	4864	5108	5614	5791	105047	36919	205567
Totals	3874	4566	6057	6596	5769	5153	6007	6266	6580	6763	7225	7716	8480	8743	152075	63292	305162
Specimens of Sputum examined—																	
Positive	723	626	569	548	550	615	649	693	649	683	769	846	1002	966	9362	6705	25955
Negative	4540	3686	3927	3840	3699	3377	3581	3511	3878	4060	4202	4809	4957	4734	33352	12176	102329
Totals	5263	4312	4496	4388	4249	3992	4230	4204	4527	4743	4971	5655	5959	5700	42714	18881	128284
Cases admitted to hospital and sanatoria	1055	1494	1618	2000	2008	2012	2157	2007	2204	2246	2239	2347	2368	2275	39774	22669	90473
Notified from Common Lodging houses	16	18	14	15	14	17	39	25	37	27	36	24	28	43	1922	3109	5384
Number of cases under observation ..	6839	6680	6470	6316	6136	6421	6736	7034	7140	7558	7951	8271	8650	9017	165645	33702 Approx.	—

† Method commenced on 1st December, 1925.

TABLE 12.—Return showing the Work of the Clinic during 1946.

Diagnosis	Pulmonary				Non-Pulmonary				Total				Grand Total
	Adults		Children		Adults		Children		Adults		Children		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
A.—New cases examined during the year (excluding contacts)—													
(*a*) Definitely tuberculous	384	259	22	17	36	43	29	12	420	302	51	29	802
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	141	94	13	17	265
(*c*) Non-tuberculous	..	..	..	..	..	..	..	..	1074	1241	123	117	2555
B.—Contacts examined during the year—													
(*a*) Definitely tuberculous	9	20	8	8	..	..	4	4	9	20	12	12	53
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	8	22	25	20	75
(*c*) Non-tuberculous	..	..	..	..	..	..	..	..	240	452	313	287	1292
C.—Cases written off the Clinic Register as—													
(*a*) Recovered	244	129	29	12	60	77	48	42	204	206	77	56	543
(*b*) Non-tuberculous	..	..	..	..	..	..	..	..	1314	1696	436	404	3847
D.—Number of persons on Clinic Register on December 31st—													
(*a*) Definitely tuberculous	1959	1563	190	165	275	393	255	203	2234	1956	445	368	5003
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	149	116	38	37	340

Cases of tuberculosis who received Treatment from the Clinic	404
Attendances at the Clinic	33,448
X-ray Examinations	4,598

TABLE 13.

Insured Cases Applying for Treatment for the Years 1914-1946.

	Males	Females	Total
1914	730	321	1,051
1915	572	315	887
1916	747	316	1,063
1917	728	359	1,087
1918	642	261	903
1919	630	255	885
1920	645	250	895
1921	615	255	870
1922	543	265	808
1923	539	291	830
1924	597	371	968
1925	610	327	937
1926	562	368	930
1927	555	296	851
1928	612	372	984
1929	610	376	986
1930	551	352	903
1931	555	360	915
1932	451	323	774
1933	503	281	784
1934	471	284	755
1935	428	283	711
1936	483	312	795
1937	507	345	852
1938	466	269	735
1939	413	306	719
1940	493	317	810
1941	521	297	818
1942	475	347	822
1943	482	357	839
1944	426	321	747
1945	489	331	820
1946	431	270	701

Cases of discharged Service personnel referred for treatment—261.

Number of patients who had so far recovered that no signs of active disease were found : Insured—392 ; Uninsured—140.

Grants of food were made in 252 instances to 62 families, and 6 grants of clothing were supplied to 6 patients in hospital and sanatoria to enable them to derive full benefit from treatment.

Special visits to the number of 10,025 have been paid by the Tuberculosis Nurses and 759 visits by the Clinical Nurse who attends to domiciliary patients requiring surgical dressings and nursing care.

TABLE 14.—Insured Cases Treated in 1946.

Residential	1,068
Tuberculosis Clinic	50
Domiciliary	1,918
Total	3,036

Analysis of Cases Treated.

TABLE 15.—*Residential* (*Insured*).

INSTITUTION	Total Cases Treated (1)		Discharged from Institutions		Died	* Residential Treatment discontinued in other cases	Still under Residential Treatment on 1st Jan., 1946
	Males	Females	Improved (2)	Without Improvement (3)	(4)	(5)	(6)
			PULMONARY				
Baguley	264		76	9	34	31	114
		209	74	8	22	12	93
Crossley	42		18	3	—	1	20
		99	35	7	3	3	51
Abergele	110		57	4	4	2	43
		—	—	—	—	—	—
Barrowmore	44	—	12	5	3	3	21
Withington	132		64	9	30	—	29
		54	18	5	14	—	17
Crumpsall	35		8	10	13	1	3
		11	4	2	1	—	4
Manchester Royal Infirmary ..	—	—	—	—	—	—	—
Total Pulmonary	627	373	366	62	124	53	395
			NON-PULMONARY				
Barrowmore	—	—	—	—	—	—	—
Manchester Royal Infirmary ..	3		3	—	—	—	—
		6	6	—	—	—	—
Skin Hospital	—		—	—	—	—	—
		1	1	—	—	—	—
Ancoats Hospital	—	—	—	—	—	—	—
Shropshire Orthopaedic Hospital	24		8	—	1	—	15
		11	8	—	—	—	3
Withington	5		1	—	2	—	2
		—	—	—	—	—	—
Crumpsall	9		3	2	2	—	2
		9	5	1	2	—	1
Total Non-Pulmonary ..	41	27	35	3	7	—	23
TOTAL—ALL FORMS	668	400	401	65	131	53	418

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* The figures in column (5) relate to cases as to the progress of which no definite report is available for various reasons—*e.g.*, the withdrawal from the Institution of the insured persons themselves before the expiration of the period for which they were nominated for the treatment.

TABLE 16.—*Residential* (*Uninsured and Children under* 15).

INSTITUTION	Total Cases Treated			Discharged from Institutions		Died	* Residential Treatment discontinued in other cases	Still under Residential Treatment on 1st Jan., 1946
	Males	Females (1)	Children	Improved (2)	Without Improvement (3)	(4)	(5)	(6)
			PULMONARY					
guley	13			5	—	3	1	4
		53		18	3	8	6	18
			—	—	—	—	—	—
ssley	3			—	1	1	—	1
		15		3	1	—	4	7
			—	—	—	—	—	—
ergele	6			2	—	—	—	4
		—		—	—	—	—	—
			164	73	—	2	1	88
rrowmore	1	—	—	—	—	—	—	1
thington	34			15	2	13	—	4
		48	—	23	4	14	—	7
oth Hall	—			—	—	—	—	—
		2		1	1	—	—	—
			44	27	3	7	2	5
umpsall	15			1	2	12	—	—
		3	—	1	2	—	—	—
nchester Royal Infirmary	—	—	—	—	—	—	—	—
Total Pulmonary	72	121	208	169	19	60	14	139
			NON-PULMONARY					
ergele	—			—	—	—	—	—
		—		—	—	—	—	—
			114	40	—	—	—	74
nchester Royal Infirmary	—			—	—	—	—	—
		—		—	—	—	—	—
			—	—	—	—	—	—
in Hospital	—	—	—	—	—	—	—	—
coats Hospital	—	—	—	—	—	—	—	—
ropshire Orthopaedic Hospital	4			2	—	—	—	2
		3	—	—	—	—	—	3
ithington	1			—	—	—	—	1
		4	—	1	2	—	—	1
ooth Hall	—			—	—	—	—	—
		—		—	—	—	—	—
			42	23	3	14	—	2
rumpsall	1			—	1	—	—	—
		10	—	3	2	4	—	1
Total Non-Pulmonary	6	17	156	69	8	18	—	84
otal—ALL FORMS	78	138	364	238	27	78	14	223

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* The figures in column (5) relate to cases of which no definite report is available for various reasons—*e.g.*, the withdrawal from the Institution of the persons themselves before the expiration of the period for which they were nominated for the treatment.

Light Therapy.

Artificial light treatment has been continued for those cases that experience has proved benefit by this form of therapy. During the last 17 years 846 cases have been under this treatment. Two forms of artificial sunlight are employed, viz., the mercury vapour lamp and the open arc lamp.

The following table analyses these cases in detail and shows a gain in weight and improvement in many patients. Quiescence was secured in a number of those who completed the necessary course of treatment. It is to be noted that those particularly benefiting are the sufferers from tuberculous adenitis (with or without abscess formation), and those in whom abdominal tuberculosis existed.

It must be borne in mind that no figures of the treatment of Lupus appear, as these cases are treated by the Manchester and Salford Hospital for Skin Diseases (on behalf of the Corporation), and in the majority of instances with very marked benefit. The introduction of treatment by Calciferol has been instrumental in shortening in some cases the length of treatment required. The condition has cleared up after a few months' treatment where formerly it proved intractable for years.

TABLE 17.

Localisation of the Disease	No. of Cases	Sex		Conditions of Cases at the end of Treatment				Weight Record			Average duration of Treatment in Months	Treatment discontinued	Ca st un Tre me and incl i tal
		M.	F	Quiescent	Improved	Stationary	Worse	Gain	Stationary	Loss			
Tuberculous adenitis with abscess	176	75	101	70	31	6	—	89	8	10	13·74	69	
Tuberculous adenitis without softening ..	506	222	284	182	66	17	6	207	28	36	11·11	235	
Tuberculosis of bones joints, and spine ..	42	28	14	10	3	2	—	12	—	3	10·93	27	
Tuberculosis of abdomen and tabes mesenterica	65	22	43	19	10	4	—	26	2	5	9·68	32	–
Tuberculosis of bronchial glands	4	4	—	—	2	—	1	3	—	—	7·00	1	–
Tuberculosis of skin ..	9	3	6	—	2	—	—	1	1	—	2·75	7	–
Tuberculosis of kidney ..	5	2	3	—	1	1	—	1	—	1	12·00	3	–
Pre-tuberculous conditions	19	10	9	6	5	—	—	10	—	1	5·36	8	–
Chest wall	5	3	2	1	—	—	—	—	1	—	8·00	4	

TABLE 18.

Non-pulmonary cases treated at various Institutions :—

Tuberculosis of :—

Bones and Joints	162
Glands	25
Genito Urinary Tract	1
Abdomen	30
Fistula	1
Skin—	
1. Lupus Vulgaris	59
2. Toxi Tuberculids	1
3. Bazins Disease	2
4. Tuberculous Ulceration of Skin	3

TABLE 19.

Tables showing After History of Quiescent and Arrested Cases (Insured).

1936.

No Tubercle Bacilli found. *Tubercle Bacilli found.*

Stage	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died
I.	M	54	26	20	8	M	27	17	6	4
	F	51	29	14	8	F	18	13	4	1
II.	M	15	4	5	6	M	28	7	8	13
	F	24	9	11	4	F	11	8	2	1
III.	M	6	2	1	3	M	8	4	1	3
	F	4	—	1	3	F	2	2	—	—
	M & F	154	70	52	32	M & F	94	51	21	22
1937.										
I.	M	40	22	11	7	M	20	10	5	5
	F	33	25	4	4	F	8	6	1	1
II.	M	21	4	8	9	M	24	15	3	6
	F	18	11	5	2	F	18	13	4	1
III.	M	2	—	—	2	M	4	1	1	2
	F	2	1	1	—	F	4	2	—	2
	M & F	116	63	29	24	M & F	78	47	14	17

TABLE 19—continued

Tables showing After History of Quiescent and Arrested Cases (Insured)—continued

1938.

No Tubercle Bacilli found. *Tubercle Bacilli found.*

Stage	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died
I.	M	34	16	13	5	M	9	5	3	1
	F	31	17	10	4	F	12	7	4	1
II.	M	27	14	8	5	M	33	15	6	12
	F	17	13	3	1	F	11	6	2	3
III.	M	3	1	1	1	M	—	—	—	—
	F	1	1	—	—	F	1	1	—	—
	M & F	113	62	35	16	M & F	66	34	15	17

1939.

Stage	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died
I.	M	19	13	3	3	M	5	4	—	1
	F	15	10	2	3	F	7	6	—	1
II.	M	22	14	2	6	M	26	14	4	8
	F	18	9	5	4	F	10	9	1	—
III.	M	1	1	—	—	M	2	1	—	1
	F	3	1	—	2	F	2	2	—	—
	M & F	78	48	12	18	M & F	52	36	5	11

1940.

Stage	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died
I.	M	10	9	1	—	M	2	2	—	—
	F	20	16	4	—	F	2	—	2	—
II.	M	14	10	2	2	M	22	18	1	3
	F	4	1	3	—	F	16	14	2	—
III.	M	3	1	—	2	M	—	—	—	—
	F	1	1	—	—	F	4	3	1	—
	M & F	52	38	10	4	M & F	46	37	6	3

TABLE 19—continued

Tables showing After History of Quiescent and Arrested Cases (Insured)—continued

1941.

No Tubercle Bacilli found. *Tubercle Bacilli found.*

Stage	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died
I.	M	15	12	2	1	M	7	6	—	1
	F	15	12	3	—	F	4	3	1	—
II.	M	17	14	2	1	M	22	15	5	2
	F	13	11	1	1	F	14	12	1	1
III.	M	1	—	—	1	M	2	2	—	—
	F	2	—	1	1	F	2	2	—	—
	M & F	63	49	9	5	M & F	51	40	7	4
1942.										
I.	M	26	19	3	4	M	6	5	—	1
	F	24	20	2	2	F	10	9	1	—
II.	M	12	9	3	—	M	19	16	—	3
	F	12	8	1	3	F	9	6	2	1
III.	M	2	2	—	—	M	—	—	—	—
	F	2	2	—	—	F	1	1	—	—
	M & F	78	60	9	9	M & F	45	37	3	5
1943.										
I.	M	35	31	4	—	M	9	8	—	1
	F	35	33	2	—	F	6	4	2	—
II.	M	15	11	3	1	M	21	18	2	1
	F	18	15	2	1	F	21	18	—	3
III.	M	2	1	—	1	M	2	—	—	2
	F	2	—	1	1	F	2	2	—	—
	M & F	107	91	12	4	M & F	61	50	4	7

TABLE 19—continued

Tables showing After History of Quiescent and Arrested Cases (Insured)—continued

1944.

No Tubercle Bacilli found. *Tubercle Bacilli found.*

Stage	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died	Sex	Number of Cases marked off as Quiescent	Number known to be still living at end of 1946	Lost sight of	Died
I.	M	56	45	6	5	M	14	13	—	1
	F	48	42	5	1	F	10	10	—	—
II.	M	14	13	—	1	M	31	30	1	—
	F	12	9	1	2	F	24	24	—	—
III.	M	1	1	—	—	M	3	3	—	—
	F	1	1	—	—	F	—	—	—	—
	M & F	132	111	12	9	M & F	82	80	1	1

1945.

I.	M	42	41	1	—	M	19	17	2	—
	F	26	23	1	2	F	20	20	—	—
II.	M	17	16	1	—	M	50	46	1	3
	F	12	11	1	—	F	40	39	1	—
III.	M	1	1	—	—	M	4	4	—	—
	F	2	2	—	—	F	4	4	—	—
	M & F	100	94	4	2	M & F	137	130	4	3

TABLE 20.

Abergele Sanatorium.

Adult Males—Pulmonary.

Year (1)	No. of new cases (2)	Position at the end of 1946				No. of Re-admissions
		Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
7	26	10	4	5	7	12
8	26	9	2	6	9	9
9	42	24	2	10	6	9
0	44	27	10	3	4	—
1	33	17	3	8	5	4
2	30	25	—	4	1	6
3	38	28	1	6	3	9
4	36	30	1	—	5	4
5	59	50	4	1	4	—
6	65	63	1	1	—	1
tal ..	399	283	28	44	44	54

Adult Females—Pulmonary.

Year (1)	No. of new cases (2)	Position at the end of 1946				No. of Re-admissions
		Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
37 . ..	11	5	—	6	—	2
38	10	5	—	3	2	1
39	11	7	1	1	2	—
40	5	4	1	—	—	—
41	4	1	2	1	—	1
42	7	5	—	1	1	1
43	9	6	1	1	1	—
44	8	8	—	—	—	—
45	3	2	1	—	—	—
46	—	—	—	—	—	—
tal ..	68	43	6	13	6	5

TABLE 20—Continued

Abergele Sanatorium—*continued*

Child Males—Pulmonary.

Year (1)	No. of new cases (2)	Position at the end of 1946				No. of Re-admissions
		Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
1937	19	13	—	—	6	3
1938	20	15	—	—	5	1
1939	26	20	1	—	5	2
1940	19	16	—	1	2	2
1941	21	19	—	—	2	2
1942	16	15	—	—	1	2
1943	32	29	1	—	2	1
1944	28	24	2	—	2	1
1945	24	24	—	—	—	—
1946	38	37	1	—	—	2
Total ..	243	212	5	1	25	16

Child Females—Pulmonary.

Year (1)	No. of new cases (2)	Position at the end of 1946				No. of Re-admissions
		Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
1937	22	14	4	2	2	—
1938	17	13	1	—	3	—
1939	14	8	2	1	3	1
1940	20	14	4	1	1	—
1941	16	14	2	—	—	1
1942	17	16	1	—	—	—
1943	33	30	2	1	—	—
1944	22	18	2	—	2	1
1945	25	23	2	—	—	—
1946	30	28	1	—	1	1
Total ..	216	178	21	5	12	4

TABLE 20—continued

Abergele Sanatorium—*continued*

Child Males—Non-pulmonary.

Year (1)	No. of new cases (2)	Position at the end of 1946				No. of Re-admissions
		Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
1937	24	18	—	—	6	1
1938	27	20	—	1	6	3
1939	24	21	1	—	2	3
1940	14	12	—	—	2	3
1941	25	20	2	—	3	2
1942	26	21	—	—	5	—
1943	24	23	1	—	—	1
1944	16	15	—	—	1	—
1945	27	27	—	—	—	3
1946	20	20	—	—	—	2
Total ..	227	197	4	1	25	18

Child Females—Non-pulmonary.

Year (1)	No. of new cases (2)	Position at the end of 1946				No. of Re-admissions
		Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
1937	24	19	2	—	3	—
1938	14	11	1	1	1	3
1939	13	13	—	—	—	2
1940	11	8	—	—	3	—
1941	16	14	—	—	2	—
1942	23	23	—	—	—	—
1943	11	9	1	—	1	2
1944	15	13	2	—	—	—
1945	15	14	—	—	1	—
1946	12	12	—	—	—	—
Total ..	154	136	6	1	11	7

TABLE 21.

Baguley Sanatorium.

Males.

Year (1)	No. of new cases (2)	Position at the end of 1946				No. of Re-admissions
		Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
1937	264	69	55	108	32	91
1938	188	48	38	75	27	76
1939	186	47	61	62	16	93
1940	213	78	55	63	17	93
1941	181	76	40	52	13	52
1942	198	79	48	63	8	46
1943	218	95	61	48	14	53
1944	173	110	29	24	10	48
1945	196	155	23	11	7	42
1946	90	74	10	3	3	25
Total ..	1907	831	420	509	147	619

Females.

Year (1)	No. of new cases (2)	Position at the end of 1946				No. of Re-admissions
		Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
1937	148	43	42	48	15	27
1938	148	51	25	50	22	41
1939	131	37	40	38	16	48
1940	133	60	27	32	14	37
1941	136	61	31	34	10	29
1942	140	85	33	15	7	22
1943	167	101	36	23	7	20
1944	165	108	25	19	13	37
1945	191	126	39	12	14	26
1946	83	65	16	1	1	30
Total ..	1442	737	314	272	119	317

TABLE 22.

Crossley Sanatorium.

Males.

Year (1)	No. of new cases (2)	Position at the end of 1946: Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	No. of Re-admissions: These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
1937	35	14	2	9	10	11
1938	48	23	1	11	13	8
1939	39	21	2	9	7	11
1940	36	10	6	16	4	8
1941	32	25	2	5	—	8
1942	33	18	2	6	7	8
1943	41	32	1	6	2	9
1944	41	35	2	2	2	2
1945	32	28	1	3	—	4
1946	18	17	—	—	1	4
Total ..	355	223	19	67	46	73

Females.

Year (1)	No. of new cases (2)	Position at the end of 1946: Known to be still living (3)	Died in the Sanatorium (4)	Died elsewhere (5)	Lost sight of (6)	No. of Re-admissions: These are additional to the cases in Column 2 and are given to show the number of beds occupied (7)
1937	85	39	1	26	19	23
1938	61	24	5	20	12	23
1939	66	28	4	18	16	28
1940	65	42	5	8	10	21
1941	45	34	4	4	3	15
1942	62	42	1	8	11	14
1943	36	30	1	2	3	10
1944	46	43	—	1	2	12
1945	48	41	1	3	3	7
1946	57	56	1	—	—	6
Total ..	571	379	23	90	79	159

PUBLIC VACCINATION.

There are 26 public vaccinators and 4 vaccination officers.

The percentage of infants successfully vaccinated in Manchester was 59·22 in **1945**. The percentages for the last five years were :—

Year	*Percentage*
1941	56·43
1942	58·34
1943	59·19
1944	58·72
1945	59·22

The following is a summary of the return made to the Ministry of Health of vaccinations for the year *1945 :—

	Numbers	Percentage
Successful vaccinations	7,300	59·22
Insusceptible of vaccination	25	0·20
Statutory declarations of conscientious objection	2,869	23·28
Died unvaccinated	591	4·80
Postponement by medical certificate	80	0·65
Not traceable	1,461	11·85
Total (= Number of children born)	12,326	100·00

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* Returns for vaccination are always for the year preceding the year covered by this report. This is unavoidable, since the period of four months from the date of birth is allowed for exemption purposes.

MANCHESTER MUNICIPAL HOSPITALS PATHOLOGICAL SERVICE.

by Dr. G. Stewart Smith, Director of Pathological Services.

STAFF.

Full time—

G. Stewart Smith, M.A.(ADMIN.), M.D.	Director of Pathological Services
Lois Stent, M.D.	Pathologist, Withington Hospital Laboratory
T. G. S. Harkness, L.R.C.P., L.R.C.S., D.C.P.	Assistant Pathologist.

The figures given below show the work which has been carried out in the various departments of the Pathological Service during the period under review.

	Number of examinations	E.M.S. unit values
t Crumpsall Laboratory for:—		
Crumpsall Hospital	49,921	146,608
Booth Hall Hospital	8,940	60,176
Other Municipal Hospitals	619	5,223
Regional Blood Transfusion Service	5,319	7,151
Local Service Establishments	185	702
Total	64,984	219,860
t Withington Laboratory for:—		
Withington Hospital	41,258	139,373
Regional Blood Transfusion Service	3,569	3,569
Total	44,827	142,942
t Baguley Laboratory for:—		
Emergency Hospital	4,805	15,662
Sanatorium	4,286	10,859
Total	9,091	26,521
t Booth Hall Laboratory for:—		
Booth Hall Hospital	6,714	17,697
Total number of examinations	125,616	407,020

The total number of examinations carried out by the Pathological Service for the year was 125,616, this being an increase of 15,408 over the total of 110,208 for 1945. The increases were chiefly in the work at Withington and Booth Hall Hospitals. In previous annual reports each test has been counted as one unit, irrespective of the skill or time required for its performance, and therefore this method of counting does not give a fair indication of the relative amounts of work done by the various departments. During the war the Emergency Medical Service issued a schedule in which unit values were given for each test performed in the laboratory and also for post-mortem examinations carried out by the pathological staff ; in the present report these values are shown for each department of the Service. The unit values will also enable the work of any one year to be compared accurately with that of another and will probably be the yard-stick by which staffing problems can be assessed.

The staff of the Pathological Service at December 31st, 1946, was as follows:—

Crumpsall	Withington	Baguley	Booth Hall
Director 1 Assistant pathologist 1 Biochemist 1 Assistant biochemist 3 Qualified technicians 6 Junior technicians 3 Clerks	1 Pathologist 1 Qualified technician 1 Graduate technician 3 Junior technicians 1 Clerk	1 Senior technician 1 Junior technician	1 Junior technician

The Crumpsall Laboratory acts as a central laboratory, which supplies collecting outfits for specimens and bacteriological media for the whole Service ; here also the pathological tests and special chemical tests are performed. At present, until the laboratory at Booth Hall is completed, most of the work of this hospital also is carried out at Crumpsall.

During the past year structural alterations at Crumpsall have been practically completed and the considerable enlargement of the department at Withington is nearing completion. Work is proceeding on the provision of a new laboratory at Monsall, and when this is completed and staffed it is proposed that the department should become a part of the Municipal Hospitals Pathological Service. The structural alterations required for the new laboratory at Booth Hall are expected to be completed during 1947.

One member of the technical staff has obtained the final certificate in bacteriological technique of the Institute of Medical Laboratory Technology and 2 junior technicians have gained the intermediate certificate.

A paper on Stillbirth and Neonatal Death, by Dr. Mary Evans and the Director of the Service, was published in the Journal of Obstetrics and Gynaecology, 1946, 53, 441.

Baguley Sanatorium.

Examinations made at the Pathological Laboratory.

Examination	E.M.S. Hospital	Sanatorium
BLOOD:		
HAEMATOLOGY—		
Red cell count	367	126
White cell count	358	126
Haemoglobin estimation	449	140
Differential count	249	112
Malaria parasites	73	..
Reticulocytes	4	1
Bleeding time	1	4
Sedimentation rate	193	..
Red cell volume	78	..
SEROLOGY—		
Grouping	113	50
Compatibility test	282	86
Agglutination test	6	4
BACTERIOLOGY—		
Cultural examination	7	2
CHEMISTRY—		
Sugar	93	8
Urea	4	2
Bilirubin	3	1
Glucose Tolerance Test	1	3
Miscellaneous examinations	2	3
URINE:		
Microscopical examination	55	39
Miscroscopical examination for tubercle bacilli	8	13
Cultural examination	49	30
Urea concentration test	2	..
Urea clearance test	7	..
Sugar	6	12
Diastase	1	..
Miscellaneous examinations	18	23
SWABS:		
Microscopical examination	11	4
Cultural examination for C. diphtheriae	56	24
Cultural examination for haemolytic streptococci	53	27
SPUTUM:		
Microscopical examination for tubercle bacilli	635	2,391
Concentration test for tubercle bacilli	56	299
Cytology	205	1
Cultural examination	248	..
FAECES:		
Microscopical examination	46	19
Cultural examination	63	23
Chemical examination	54	10
CEREBROSPINAL FLUID:		
Microscopical examination	4	4
Cultural examination	1	3
Protein	2	4
Globulin	2	4
Sugar	..	2
Chloride	2	3
Microscopical examination for tubercle bacilli	..	2
PUS AND EFFUSIONS:		
Microscopical examination	323	227
Microscopical examination for tubercle bacilli	78	190
Cultural examination	330	233
Coagulase	65	15
Bile solubility	10	..
Penicillin sensitivity test	42	5
Penicillin estimation	67	..
Fractional Gastric Analysis	23	11
	4,805	4,286
Total	9,091	

The total of 9,091 examinations=26,521 E.M.S. units.

Booth Hall Hospital.

Examinations made at the Pathological Laboratory.

Blood :—

Haemoglobin estimation	1,834
Red cell count	1,273
White cell count	1,883
Differential count	908
Reticulocytes	28
Platelet count	48
Grouping	65
Compatibility test	113
Bleeding time	55
Coagulation time	52
Red cell fragility test	22
Sedimentation rate	430
Malaria parasites	3
	6,714

The total of 6,714 examinations=17,697 E.M.S. units.

Crumpsall Hospital.

Examinations made at the Pathological Laboratory.

Type of Examination	For Crumpsall Hospital	For Booth Hall Hospital	For Withington Hospital	For Baguley Sanatorium and Emergency Hospital	Total
BLOOD:					
Haematology—					
Red cell count	1,934	..	..	..	1,934
Haemoglobin estimation	9,705	..	..	..	9,705
White cell count	4,146	..	..	..	4,146
Differential count	644	..	..	..	644
Reticulocytes	256	..	..	..	256
Malaria parasites	164	..	..	..	164
Platelet count	189	..	..	..	189
Bleeding time	35	..	..	..	35
Coagulation time	41	..	..	..	41
Prothrombin time	11	1	..	..	12
Red cell fragility	18	1	..	..	19
Sternal puncture	51	2	..	..	53
Serology—					
Agglutination test	49	17	..	..	66
Paul-Bunnell reaction	23	4	..	..	27
Grouping	3,176	..	..	..	3,176
Compatibility test	840	..	..	..	840
Rh. testing	2,755	15	..	..	2,770
Bacteriology—					
Cultural examination	286	63	..	..	349
Chemistry—					
Sugar	867	165	..	..	1,032
Urea	1,135	178	..	..	1,313
Serum phosphatase	370	16	37	1	424
Bilirubin	206	11	13	..	230
Sulphonamides	387	18	..	..	405
Protein	298	45	52	17	412
Cholesterol	173	13	40	2	228
Thiocyanate	127	..	..	..	127
Sodium	19	..	14	..	33
Chlorides	35	5	5	..	45
Plasma prothrombin	29	..	..	..	29
Potassium	5	..	4	..	9
Icterus index	17	..	..	..	17
Calcium	13	5	4	2	24
Alkali reserve	25	1	..	..	26
Glucose tolerance test	39	14	..	..	53
Uric acid	3	..	1	..	4
Thymol turbidity	118	6	17	..	141
Colloidal gold	142	8	17	1	168
Pyruvic acid	46	16	26	..	88
Cephalin cholesterol	138	4	17	..	159
Phosphate	5	3	2	1	11
Miscellaneous examinations	15	..	1	..	16

Examinations made at the Pathological Laboratory—continued.

Type of Examination	For Crumpsall Hospital	For Booth Hall Hospital	For Withington Hospital	For Baguley Sanatorium and Emergency Hospital	Total
RINE:					
Routine microscopical examination	2,429	362	..	..	2,791
Microscopical examination for tubercle bacilli	82	21	..	..	103
Cultural examination	2,481	362	..	..	2,843
Urea clearance test	136	..	..	..	136
Urea concentration test	43	10	..	..	53
Sugar	..	4	..	..	4
Biological test	7	1	5	..	13
Friedman test	31	2	69	5	107
Diastase	34	1	..	..	35
Sulphonamides	1	..	..	..	1
Lead excretion	1	..	..	..	1
Chlorides	1	10	..	..	11
Ascorbic acid	61	15	..	..	76
Hippuric acid	77	..	..	..	77
Urobilinogen	63	3	..	..	66
Pregnandiol	14	..	..	..	14
Ketosteroids	2	..	..	..	2
Miscellaneous examinations	34	7	7	..	48
Stomach contents—					
Microscopical examination	22	156	..	..	156
Biological test	8	89	1	..	98
AECES:					
Microscopical examination	146	38	..	..	184
Cultural examination	999	1,734	..	..	2,733
Chemical examination	563	6	..	..	569
Fat analysis	6	38	6	2	52
WABS:					
Microscopical examination	376	613	..	..	989
Cultural examination for C. diphtheriae	467	688	..	..	1,154
Cultural examination for haemolytic streptococci	393	649	..	..	1,042
Virulence test	3	5	..	..	8
PUTUM:					
Cytology	7	..	..	..	7
Microscopical examination for tubercle bacilli	2,515	134	..	..	2,649
Concentration test for tubercle bacilli	26	..	..	..	26
Predominating organisms	1,775	103	..	..	1,878
Biological test	17	1	..	9	27
Miscellaneous examinations	35	3	..	..	38
US AND EFFUSIONS:					
Microscopical examination	1,213	672	..	1	1,886
Microscopical examination for tubercle bacilli	144	69	1	1	215
Cultural examination	1,121	698	..	1	1,820
Biological test	37	14	26	3	80
Penicillin sensitivity test	18	69	..	..	87
Coagulase	226	113	..	..	339
Smears—					
Gonococci	943	39	..	..	982
Microscopical examination for Treponema pallidum	13	..	..	..	13
Microscopical examination for Trichomonas vaginalis	128	..	..	..	128
Milk—					
Bacterial count	..	48	..	..	48
Fat content	..	48	..	..	48
Biological test	..	36	..	..	36
CEREBROSPINAL FLUID:					
Cell count	346	142	..	..	488
Microscopical examination	108	152	..	..	260
Protein	268	186	..	..	454
Globulin	267	187	..	..	454
Sugar	6	17	..	..	23
Chloride	235	189	..	..	424
Cultural examination	88	148	..	..	236
Colloidal gold curve	108	3	74	2	187
Miscellaneous examinations	3	12	..	..	15
Fractional Gastric Analysis	384	2	..	..	386
Basal Metabolic Rate	122	..	..	..	122
Vaccines	14	60	..	..	74
PATHOLOGY:					
Post-mortem examinations	596	104	..	7	707
Histological preparations	2,143	266	..	89	2,498
Total	49,921	8,940	439	144	59,444

In addition, the following examinations were carried out at Crumpsall:—

For Monsall Hospital.

Urine—Friedman test	11
Histological preparations	14
Post-mortem examinations	5
	30

For R.A.F. Station, Heaton Park.

Throat swab—	
Microscopical examination	4
Cultural examination for C. diphtheriae	4
Cultural examination for haemolytic streptococci	4
Blood—	
Red cell count	5
Haemoglobin estimation	5
White cell count	3
Differential count	3
Malaria parasites	6
Sedimentation rate	1
Glucose tolerance test	1
Urine—	
Routine microscopical examination	3
Cultural examination	3
Friedman test	1
Faeces—	
Microscopical examinatioh	3
Cultural examination	2
	48

For Swinton Homes.

Throat swab—Microscopical examination	2
Cultural examination for C. diphtheriae	2
Cultural examination for haemolytic streptococci	2
	6

For R.A.F. Station, Heywood.

Throat swab—	
Microscopical examination	8
Cultural examination for C. diphtheria	8
Cultural examination for haemolytic streptococci	8
	24

For R.A.P.C., Manchester.

Swabs—	
Microscopical examnation	8
Cultural examinationi for C. diphtheriae	8
Cultural examination for haemolytic streptococci	8
Blood—	
Red cell count	2
haemoglobin estimation	2
White cell count	2
	30

For A.T.S., Manchester.

Urine—	
Routine microscopical examination	2
Cultural examination	2
Blood—	
Red cell count	6
haemoglobin estimation	6
White cell count	6
Faeces—Cultural examination	3
Throat swab—	
Microscopical examination	7
Cultural examination for C. diphtheriae	7
Cultural examination for haemolytic streptococci	7
	46

For P.O.W. Camp, Bury.

Faeces—Cultural examination	29
Urine—	
Routine microscopical examination	2
Cultural examination	2
Pus—Microscopical examination	1
Smears—Gonococci	3
	37

For the Regional Blood Transfusion Service.

Blood groupings	1,830
Kahn tests	483
Plasma withdrawals	1,657
Rh. testing	1,349
	5,319

Total 64,984

The total of 64,984 examinations=219,860 E.M.S. units.

Withington Hospital.

Examinations made at the Pathological Laboratory.

BLOOD :—

Haematology—

Haemoglobin estimation	8,750
Red cell count	2,342
White cell count	3,891
Differential count	1,414
Reticulocytes	169
Platelet count	37
Malaria parasites	47
Mean cell diameter	3
Bleeding time	33
Coagulation time	34
Prothrombin index	22
Sedimentation rate	246
Haematocrit	211
Red cell fragility	7
Sternal puncture	21
Rh. factor	1,673
Miscellaneous	3

Examinations made at the Pathological Laboratory—continued.

Serology—	
Grouping	2,173
Compatibility test	624
Agglutination test	113
Cold agglutination	23
Paul Bunnell reaction	12
Bacteriology—	
Culture	99
Chemistry—	
Sugar	1,834
Urea	1,016
Bilirubin	43
Sulphonamides	37
Calcium	24
Phosphate	14
Phosphatase	156
Alkali reserve	18
Chloride	34
Miscellaneous examinations	18
URINE :—	
Routine microscopical examination	1,954
Microscopical examination for tubercle bacilli	94
Cultural examination	1,891
Sugar	140
Ascorbic acid	62
Urea concentration test	3
Urea clearance test	117
Miscellaneous examinations	91
FAECES :—	
Microscopical examination	294
Cultural examination	1,037
Occult blood test	96
Other chemical examinations	6
SWABS :—	
Microscopical examination	31
Cultural examination for C. diphtheriae	213
Cultural examination for haemolytic streptococci	93

Examinations made at the Pathological Laboratory—continued.

Sputum :—	
Cytology	25
Microscopical examination for tubercle bacilli	3,086
Concentration test for tubercle bacilli	149
Predominating organisms	398
Miscellaneous examinations	1
Pus and Effusions :—	
Routine microscopical examination	621
Microscopical examination for tubercle bacilli	132
Cultural examination	782
Penicillin sensitivity test	148
Penicillin estimation	4
Soluble haemolysin	5
Coagulase	329
Streptococcus grouping	8
Pneumococcus typing	2
Miscellaneous examinations	9
Smears—	
Gonococci	739
Cultural examination	295
Microscopical examination for Tr. vaginalis	148
Microscopical examination for Tr. pallidum	10
Cerebrospinal Fluid :—	
Cell count	197
Microscopical examination	49
Protein	195
Globulin	177
Sugar	13
Chlorides	79
Cultural examination	60
Vaccines	11
Glucose Tolerance Test	31
Fractional Gastric Analysis	236
Basal Metabolic Rate	46
Pathology :—	
Post-mortem examinations	305
Histological preparations	1,649
Miscellaneous examinations	56
	41,258
Regional Blood Transfusion Service :—	
Groupings	2,299
Plasma withdrawals	1,270
	3,569

Total .. 44,827.

The total of 44,827 examinations = 142,942 E.M.S. units.

HOSPITALS AND INSTITUTIONS.

General Statistics for the Year ended 31st December, 1946.

	Crumpsall Hospital	Withington Hospital	Booth Hall Hospital	Rose Hill Convalescent Home	Langho Colony for Sane Epileptics	¶ Langho Emergency Hospital	Swinton Home	Dr. Garrett Memorial Home	Park House (Chronic Sick and Mental Wards)	Withington Institution (Chronic Sick and Aged and Infirm Wards)	Totals
1. Total admissions (including infants born in hospital)	13,063	11,233	5,466	206	36	..	5	364	724	547	31,644
*2. Women confined in hospital	3,029	2,417	..	..	..	..	..	..	..	..	5,509
3. Live births‡	2,876	2,334	..	..	..	..	..	..	..	..	5,210
4. Still-births	110	69	..	..	..	..	..	..	..	..	179
†5. Deaths among the newly-born (*i.e.*, under four weeks old)	81	131	..	..	..	..	..	..	..	..	212
6. Deaths among children under one year (including those given under 5)	90	139	196	..	..	..	..	..	..	..	425
7. Maternal deaths among patients confined in hospital	5	4	..	..	..	..	..	..	..	..	9
8. Total number of deaths	1,331	784	259	..	19	15	2	..	205	264	2,879
9. Discharges (including infants born in hospital)	11,432	10,365	5,213	194	44	15	6	380	596	247	28,492
10. Duration of stay of patients included in 8 and 9 above—											
(*a*) Four weeks or less	10,550	9,516	4,432	77	6	..	..	9	519	30	25,139
(*b*) Exceeding four but under thirteen weeks	1,798	1,319	825	81	3	..	..	251	116	120	4,513
(*c*) Exceeding thirteen weeks	415	314	215	36	54	30	8	120	166	361	1,719
11. Beds occupied—											
(*a*) Average during the year	1,138	641	322	43	550	109	110	816	551	694	..
(*b*) Highest	1,231 on 15-2-46	699 on 29-11-46	369 on 18-1-46	58 on 10-7-46	563 on 15-1-46	126 on 8-1-46	113 on 20-3-46	106 on 23-7-46	623 on 9-1-46	728 on 12-9-46	..
(*c*) Lowest	1010 on 15-9-46	536 on 24-12-46	275 on 10-9-46	23 on 1-1-46	536 on 31-12-46	96 on 31-12-46	108 on 22-12-46	58 on 22-12-46	519 on 18-11-46	657 on 16-1-46	..
‡12. Surgical operations under general anaesthetic (excluding dental operations)	1,978	2,417	2,146	..	..	..	..	..	..	..	6,541
13. Abdominal sections	751	883	304	..	..	..	..	..	..	..	1,938

* Relates to women discharged from or dying in hospital.

† Relates only to children born in hospital.

‡ Including spinal anaesthesia.

¶ The Emergency Hospital attached to Langho Colony is being used to accommodate chronic sick patients transferred, temporarily, from Crumpsall and Withington General Hospitals.

Average Duration of Stay.

The average duration of stay in hospital for all cases " dismissed " in 1946 was 23·59 days, as compared with 28·53 days in 1945, and 26·13 days in 1944. Details of the last five years are shown in the subjoined table.

Average duration of stay of patients discharged from or dying in the three general hospitals.

Hospital	1942—Days	1943—Days	1944—Days	1945—Days	1946—Days
Booth Hall	26·32	23·93	22·42	25·80	21·99
Crumpsall	32·29	33·28	31·07	34·28	27·53
Withington	22·80	23·51	22·68	23·33	19·87
All three hospitals	27·35	27·67	26·13	28·53	23·59

Classification (by disease groups) of days of maintenance of patients discharged from or dying in the General Hospitals, 1946.

Disease Group	Booth Hall		Crumpsall		Withington		Totals	
	Total days	Average stay (days)	Total days	Average stay (days)	Total days	Average stay (days)	Total days	Avera stay (days
1. *Infectious disease	13,817	59·56	13,699	39·47	35,527	105·42	63,043	68·8
2. Cancer and other tumours	269	24·45	16,310	39·30	8,934	39·01	25,513	38·9
3. Rheumatism, diseases of nutrition, etc.	10,008	64·57	21,446	87·89	9,311	39·79	40,765	64·4
4. Diseases of blood and blood-forming organs	953	26·47	3,202	42·13	2,013	47·93	6,168	40·0
5. Chronic poisoning	..	..	16	5·33	2	1·00	18	3·6
6. Diseases of nervous system and sense organs	6,050	22·57	41,161	103·68	10,080	38·04	57,291	61·6
7. Diseases of circulatory system ..	3,020	31·46	24,038	39·15	14,743	32·47	41,801	35·9
8. Diseases of respiratory system ..	20,953	23·62	27,281	35·80	18,376	30·03	66,610	29·4
9. Diseases of digestive system.. ..	23,024	10·19	24,223	23·34	27,721	23·00	74,968	16·6
10. Non-venereal diseases of genito-urinary system	2,222	19·32	20,895	22·44	21,571	22·97	44,688	22·5
11. Diseases of pregnancy, childbirth, and the puerperal state	..	..	7,759	8·36	6,125	6·75	13,884	7·5
12. Diseases of the skin	14,473	26·75	11,185	34·00	9,486	26·87	35,144	28·7
13. Non-tuberculous diseases of bones, joints, etc.	5,475	49·77	2,354	29·06	3,436	27·93	11,265	35·8
14. Congenital malformations	2,503	59·60	98	16·33	87	6·21	2,688	43·3
15. Diseases of early infancy	2,412	33·04	369	5·05	979	6·99	3,760	13·1
16. Old age, senility, and senile decay..	..	..	51,491	192·13	2,677	49·57	54,168	168·2
17. †Violence	7,914	21·10	11,572	39·36	15,499	34·21	34,985	31·1
18. Ill-defined diseases	1,274	18·20	466	17·91	680	20·00	2,420	18·6
19. Convalescence	..	..	..	..	..	..	..	..
20. ‡Healthy	5,958	29·79	73,782	12·44	34,462	7·24	114,202	10·4
Totals	120,325	21·99	351,347	27·53	221,709	19·87	693,381	23·5

* Including tuberculosis patients. † Including accidents asssociated with fracture.

‡ Including mothers and infants discharged from maternity wards.

Sources of admission of patients discharged from or dying in General Hospitals during the Year ended 31st December, 1946 (excluding births).

Sources of Admission	Booth Hall Hospital	Crumpsall Hospital	Withington Hospital	Totals
strict medical officer	78	82	4	164
neral practitioner	2,458	5,578	4,451	12,487
luntary hospital	584	191	85	860
nicipal institution *	132	98	56	286
nicipal hospital *	155	73	50	278
her †	1,754	3,180	2,380	7,314
ff cases ‡	7	129	161	297
ternity and child welfare centres	162	238	2	402
cident ward	119	10	475	604
ergency	23	234	1,085	1,342
Totals	5,472	9,813	8,749	24,034

* Transfers.

† At Booth Hall Hospital the classification "Other" includes cases sent in by the Education epartment and the central Health Department. Maternity cases are classified as "Other" t Withington and Crumpsall Hospitals.

‡ Includes staff from Corporation establishments other than Health establishments.

ABERGELE SANATORIUM.

By Dr. G. F. Barran, Medical Superintendent.

Staff.

(a) *Visiting Consultants*—

E. D. Telford, M.A., M.SC., F.R.C.S.	Surgeon
A. Graham Bryce, M.D., F.R.C.S., D.P.H.	Thoracic Surgeon
J. Roberts, M.B., CH.B., F.R.C.S.	Ear, Nose, and Throat Surgeon
T. J. Phillips, M.R.C.S., L.R.C.P.	Ophthalmologist
R. J. Pye, L.D.S.	Dentist

(b) *Full time*—

G. F. Barran, M.D.	Medical Superintendent
M. Icht, M.R.C.S., L.R.C.P.	Deputy Medical Superintendent
Edith F. Caplan, M.B., CH.B.	Resident Assistant Medical Office
Elsie B. Jones, S.R.N., S.C.M., T.A.	Matron
H. E. Connolly	Secretary-Steward

The available beds are allocated according to the age of the patient and th type of disease, as follows :—

Age	Type of Tubercle	Sex		Beds
		M.	F.	
1—4	Bone and Joint Tuberculosis	10	10	20
4—15	,, ,,	35	35	70
1—4	Primary Tuberculosis and its complications	10	10	20
4—15	,, ,,	34	34	68
—	Admission Ward	—	—	11
		89	89	189
Adults (Plas Uchaf)	Pulmonary Tuberculosis	52	—	52
		Total available beds		241
	Isolation Ward	—		10

All beds on the children's side have been fully utilised with the excepti of those on the Admission Ward which were out of commission owing to sta shortages. Nonetheless, the number of children awaiting admission has no period during the year reached double figures.

General Classification of Cases Treated.

Classification on Admission	In residence on 1st January, 1946		Admitted		Discharged		Died		In residence on 1st January, 1947	
	Adults	Children	Adults	Children	Adults	Children	Adults	Children	Adults	Children
Pulmonary Group :—										
T.B. Minus	22	62	22	52	34	47	1	1	9	66
T.B. Plus, Group 1	2	11	9	10	3	7	—	1	8	13
T.B. Plus, Group 2	23	4	30	3	26	2	3	—	24	5
T.B. Plus, Group 3	3	2	4	—	2	—	—	—	5	2
Observation	—	9	—	11	—	18	—	—	—	2
Non-Pulmonary Group :—										
Bones and Joints	—	69	—	16	—	25	—	—	—	60
Abdominal	—	5	1	7	—	4	—	—	1	8
Other Organs	—	1	—	3	—	1	—	—	—	3
Peripheral Glands	—	3	—	7	—	8	—	—	—	2
Observation	—	1	—	2	—	2	—	—	—	1
Totals	50	167	66	111	65	114	4	2	47	162

TOTAL PATIENTS TREATED.

Adults' Section of the Sanatorium..	116
Children's Section of the Sanatorium	278

Table 2.

The result of treatment in the 162 discharged cases was as follows (twenty observation cases and three cases who were in residence for less than 28 days are excluded from this table) :—

	Total Cases Discharged	Quiescent	Improved	Stationary	Worse	Died
Adults (pulmonary)	67	22 (32·8%)	37 (55·3%)	3 (4·5%)	1 (1·5%)	4 (5·9%)
Children (pulmonary)	57	41 (71·9%)	14 (24·6%)	—	—	2 (3·5%)
Children (non-pulmonary)	38	33 (86·9%)	5 (13·1%)	—	—	—

The figures in brackets indicate the percentage of the total patients in each group discharged with their disease in the condition stated at the head of the column.

It is of interest to record that of the 57 children discharged in the pulmonary group 55, or 96·5 per cent., were either quiescent or improved on discharge ; and of the 38 children discharged in the non-pulmonary group 38, or 100·0 per cent., were either quiescent or improved on discharge.

Of the 67 adult patients discharged 59, or 88·1 per cent., were either quiescent or improved on discharge.

The children who died were in residence for 27 and 77 days respectively. The cause of death was :—

(1) Tuberculous meningitis.
(2) Pulmonary tuberculosis.

The type of case admitted and the treatment given has remained fundamentally unaltered during the year with the important exception that, following the appointment of Mr. Graham Bryce as thoracic surgeon, it has been possible to arrange for patients to be examined by means of the thoracoscope at Abergele instead of their being transferred to Baguley Sanatorium, as was the previous practise. In a sanatorium admitting mainly children, the number of minor thoracic operations performed is not large, but the benefits gained from the periodic visits of a chest surgeon can be measured not only by the direct advantage to the patients in avoiding the disturbance of transfer to another hospital, but also by an increase in the clinical interest for the medical and nursing staff concerned. It is realised that chest surgery is only one of the many methods available for the treatment of pulmonary tuberculosis, but there is no doubt that it is a therapeutic measure of very considerable importance in attracting nurses and medical men to those sanatoria giving such facilities. It is hoped that this will be taken into consideration in planning the institutional treatment of the future. The treatment of tuberculosis suffers from too great a divorce from general medical practice and the custom of maintaining institutions for the sole management of one particular manifestation of the disease, usually adult pulmonary tuberculosis, is leading to a further narrowing of this specialty. The tendency could be avoided and staffing made easier if it were a general rule to build institutions of not less than 450 beds, catering for both pulmonary and non-pulmonary tuberculosis in the varying age groups and providing facilities for complete treatment, both medical and surgical. Only under such conditions can doctors and nurses obtain a complete training in the varied manifestations of the disease.

Some indication of the work performed is given below :

Operations.

Thoracoscopies 13, excision of knee 2, phrenic nerve interruption 14, tonsils and adenoids 13, resection of tendon sheath 1, tenotomy 1, orchidectomy 1, strabismus correction 1, drainage of antrum 1, glands of neck 4, others 5.

Pneumothorax.

Inductions	29
Refills	726

Pneumoperitoneum.

Induction	6
Refills	80

Plaster Work.

The number of plaster splints made was 106.

All plasters are thinly coated with non-inflammable celluloid after application, thus greatly increasing their length of service. By this method the most untidy child's plaster can be maintained in good condition for at least four months.

Laboratory Work.

Sputum—Ordinary examination (Ziehl-Neelsen)	202
Cultures (Löwenstein—Jensen medium)—	
Gastric lavage	200
Sputum	64
Laryngeal swab	21
Pus	14
Urine	1
Cerebro-spinal fluid	1
Total	503

X-ray Department.

The total number of X-ray films taken was 1,194 and there were 487 screening examinations.

Physiotherapy Department.

Massage and exercises	4,434
Infra-red and Faradism	83
Actino-therapy	954

Infectious Disease.

It is interesting to report that the year passed without the development of an infectious fever in any child, thus giving an undisturbed year's work. Credit for this is largely due to the careful supervision of those responsible for the children prior to admission.

School.

The school activities continue to thrive under the Head Teacher's enthusiastic leadership.

A colour film of the children's Summer Festival aroused considerable interest.

Nursing Staff.

An Annual Report would not, under present conditions, be complete without drawing attention once more to the serious deficiency in the numbers of the nursing staff. The fact that cases of an infectious disease are lying at home untreated is a menace to the public health which is not yet fully appreciated, and it is tragic to receive cases, originally diagnosed some months previously in an early stage of development, which are, on admission, too advanced for successful treatment. It is hoped that with the integration of the tuberculous institutions and other hospitals as planned under the new regional organisation a fresh effort will be made to solve this problem, and thus ensure that cases of diagnosed tuberculous disease are able to receive the prompt treatment to which they are entitled.

BAGULEY SANATORIUM.

By Dr. H. G. Trayer, Medical Superintendent.

STAFF.

(a) *Visiting Consultant—*

A. Graham Bryce, M.D., F.R.C.S., D.P.H.	Surgeon (Thoracic Surgery)

(b) *Full time.*

H. G. Trayer, M.B., B.CH, B.A.O., D.P.H.	Medical Superintendent
A. J. Coello, Doctor in Medicine and Surgery (Barcelona), D.P.H. (Barcelona)	Deputy Medical Superintendent
W. L. Anderson, M.B., CH.B.	Senior Assistant Medical Officer
L. Parker, M.A., B.M., B.CH.	Resident Assistant Medical Officer
Doreen Hayes, M.B., CH.B.	Resident Assistant Medical Officer
Norah H. Burrows, S.R.N., S.C.M.	Matron
R. L. Hall, F.H.A.	Secretary-Steward.

Beds—full establishment—420. Owing to the shortage of nurses and hospital helpers the full complement has not been in use. The average number of beds available approximates the daily average number occupied, *i.e.*, 281.

The number of patients admitted was 284—115 males, 113 females, and a further 56 of both sexes from areas outside the City.

Number of Admissions, Discharges, etc., compared with the previous 4 years, including cases from administrative areas outside Manchester.

	1942	1943	1944	1945	1946
Number of patients—					
In hospital, 1st January	331	322	362	323	(1) 329
Admitted	436	498	461	515	(2) 284
Discharged	365	392	416	405	(3) 296
Died	80	66	84	104	(4) 68
Total treated	767	820	823	838	(5) 613
Remaining in hospital, 31st December ..	322	362	323	329	(6) 249
Daily average number of beds occupied	330	366	373	354·6	281
Average length of stay of patients discharged—					
Males .. .. (days)	240	209	254	255	323
Females .. .. ,,	261	293	276	276	356
Average length of time in hospital of fatal cases—					
Males .. .. (days)	248	208	411	474	516
Females .. .. ,,	231	288	276	164	132
Case mortality	10·43	8·05	9·79	12·303	11·09

NOTE.—The figures (1946) for Manchester cases only are:—

(1) 311
(2) 228
(3) 243
(4) 67
(5) 539
(6) 229

North Cheshire Joint Hospital Board.

Patients admitted from the district covered by this Board are included in all totals given in this report, as are cases admitted from other administrative areas outside the City.

Extracted, the details for the North Cheshire Joint Hospital Board are :—

In hospital, 1st January	7
Admitted	6
Discharged	3
Died	Nil
Remaining in hospital on 31st December	10

Summary of Immediate Results of Treatment.

Classification	Condition on Discharge								Died		Total
	Quiescent		Improved		Stationary		Worse				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Class T.B. Minus	—	3	20	21	2	1	—	1	5	3	56
Class T.B. Plus, Group I	—	1	6	5	—	—	—	—	—	—	12
Class T.B. Plus, Group II	2	1	74	78	16	14	2	2	13	16	218
Class T.B. Plus, Group III	—	—	4	12	6	10	7	3	19	12	73
	2	5	104	116	24	25	9	6	37	31	
Totals	291*								68		359

* The 5 remaining discharges were of non-tuberculous observation cases.

Observation Cases.

Diagnosis on discharge from observation	Stay under 4 weeks		Stay over 4 weeks		Totals		Total
	M.	F.	M.	F.	M.	F.	
Tuberculous	—	—	2	3	2	3	5
Non-Tuberculous	—	3	—	1	—	4	4
Doubtful	—	2*	—	—	—	2	2
Totals	—	5	2	4	2	9	11

* 1 still under observation at end of year; 1 took own discharge.

Co-ordinated Thoracic Surgery Service.

50 patients were admitted under this scheme ; details are given below :—

Admitted from	Operative treatment required							Total
	Thoracoplasty	Thoracoscopy	Jacobaeus	Adhesion Cutting	Phrenic Nerve Operations	Bronchoscopy	Miscellaneous	
Birmingham	1	..	..	..	..	..	..	1
Bolton	..	4	..	1	..	..	..	5
Cumberland	..	..	..	..	..	..	1 *	1
Oldham	..	6	2	2	4	..	..	14
Preston	2	..	..	..	..	1	..	3
Salford	..	..	5	6	..	1	3 †	15
Warrington	..	..	1	1	..	..	..	2
Wigan	7	..	..	..	2	..	..	9
Totals	10	10	8	10	6	2	4	50

* Discharged without operative treatment.
† 1 Partial scapulectomy, 1 cavity drainage, 1 empyema.

The following operative work was done in the theatre. The figures include those shown on the previous page, together with Manchester cases from this Sanatorium or cases transferred from other Manchester sanatoria. Similar figures for 1945 are shown as well, for comparison.

	1945	1946
Thoracoplasty	79	8
Phrenic Nerve Operations	32	47
Jacobaeus	24	39
Monaldi Cavity Drainage	7	4
Thoracoscopy	29	15
Bronchoscopy	7	8
Stab Drainage, etc.	10	8
	188	207

Patients who have undergone thoracoplasty operations are seen at regular intervals after their discharge by Mr. Graham Bryce, who examines them and advises treatment where necessary.

In order to try and establish a system that should give an absolute result on examinations of sputum after thoracoplasty, the following procedure has been adopted :—

> If two successive negatives occur, the third specimen is subjected to a concentration and culture examination. Should this prove negative, then a fourth specimen is sent for biological examination.

Military Wing.

A military wing of 126 beds was opened in the Emergency Hospital on 15th November, 1946, and it is capable of expanding to 182.

It is staffed by service personnel and has settled down as an integral part of the Sanatorium.

Physiotherapy.

This new department commenced its activities on 1st July, 1946. It has proved its value, not only for that essential aid in the pre- and post-operative treatment of patients under major thoracic surgery, but also for many other cases.

Figures for this department, alongside those for 1945, where the physiotherapist was part-time only, show the increasing importance of this treatment.

	1945	1946
Daily average number of patients on register	18	29
Total number of treatments during the year	3,287	5,003

Pathological Laboratory.

Examination of—

Sputum (of which 1,252 were positive)	2,691
Blood	665
Urine	117
Faeces	52
Cerebro-spinal fluid	22
Pus and Effusions—Microscopical	417
Cultural	233
Coagulase	15
Fractional Gastric contents	11
Penicillin sensitivity tests	5

Radiological Department.

Skiagrams taken	2,500
Patients screened	5,300

Dental.

Attendances	312
Extractions.	119
Fillings	31
Scraping and cleaning	3
Dentures	5
Repairs and adjustments to dentures	5

Visits were also made to bed patients on the wards by the dentist.

Education.

Weekly lectures over the internal radio system still provide the readiest means of teaching the individual patient all they should know of the disease and its prevention.

Recreation.

Communal recreation is slowly improving, though the number of patients able to enjoy its advantages are not as great as before the war.

The provision of gramophones available twice a week on each ward has been much appreciated, especially by those who prefer music other than that called "popular." The Record Club now possesses some 600 records.

Rehabilitation and Employment.

The neglect of many patients to register as disabled persons is not easily understood unless one assumes that they all intend to return to their previous employment, which, in many cases, is not suitable. It is regrettable that for a sanatorium of this size there are yet no prospects of it being associated with a factory giving employment to ex-patients. It is realised that the control of such a factory is now the concern of the Ministry of Labour, but its success must depend mainly on a very close liaison with the medical staff who have treated the individual patients over a long period and who are best able to assess their physical abilities.

Boot and shoe repairing, equipped with modern machinery and fitted with an adequate dust prevention system, should be a practical and suitable venture.

Nursing and Domestic Staff.

Nursing Examination Successes.—Successful candidates for the following examinations totalled :—

Tuberculosis Association Examination ..	16
Preliminary State Examination	5

Seconded Student Nurses.—We have now had twelve months' experience of this valuable aid though it is not, as suggested by the General Nursing Council, the remedy for providing adequate staff for a sanatorium.

When the scheme was decided upon a promise of 14 nurses per quarter was made, *i.e.*, senior probationers would be seconded for three months at a time. Two of the three hospitals, despite their own difficulties, kept up their complement, the other sent 6 nurses out of a possible 40. The seconded nurses have received lectures in tuberculosis, had demonstrations in the Pathological and Radiological Departments, and gained a knowledge, not only of the routine of sanatorium regime, but have learned also that much active treatment is possible for the disease in a modern sanatorium. They have invariably stated that they have enjoyed their stay here and it is hoped some will return, when qualified, to obtain their Certificate in Tuberculosis Nursing. Their help has been very real and much appreciated by the permanent nursing staff, in fact without them more beds would have had to be closed.

Hospital Helpers.—The arrival of 12 displaced persons did much to relieve the shortage in this essential hospital service.

Sickness.—A brief report on the health of the nursing staff seems appropriate at this time. Commencing with entrants, it is found that 40 persons presented themselves for vacancies on the nursing staff and of these 6 were not accepted.

Full clinical examinations of resident nursing staff amounted to 150 (this number includes 86 routine and the 40 entrants).

Mantoux Tests and Radiological Examinations.—Both these procedures are routine, not only for entrants but also for existing members of the staff. The following is a summary :—

Mantoux Tests—Analysis.

Strengths..	1/10,000		1/1,000		1/100	
	Positive	Negative	Positive	Negative	Positive	Negative
	56	17	15	2	1	1
Totals..	73		17		2	

Tests carried out	92
Individuals tested	73

Radiological Examinations.

Films taken	150
Chest films taken	145

All nursing staff are encouraged, rather than discouraged, to report sick. It is difficult to convince nurses that it is necessary and advisable to report even a common cold. There were 339 attendances at the clinic.

Out-patient Clinic Attendances.

(*a*) Baguley Sanatorium	175
(*b*) Seconded Nurses	15
Total	190

The number of cases admitted and treated in the sick-bay of the Nurses' Home was 24.

Sick-Bay Analysis.

Number of cases	24
Average day loss, per case	17¼
Total days lost	414

Type of Case	Number	Day Loss	Average Day Loss
Tonsillitis	7	48	7
"Colds"	5	31	6
Abdominal complaints	5	64	13
Subacute Rheumatism	2	128	64
Dental	2	3	1½
Fracture	1	36	36
Glandular Fever	1	56	56
Gynaecological	1	39	39

BAGULEY EMERGENCY HOSPITAL.

By Dr. H. G. Trayer, Medical Superintendent.

The year has been marked by a large drop in service cases treated in the Emergency Hospital—as is only to be expected with demobilisation in full swing—coupled with a corresponding increase in the number of civilians admitted. Many of the civilian patients were, of course, ex-service men and women, the large majority being pensioners.

The last ambulance train was received in the early part of the year, and with the closure of the General Medical and Surgical Sections the Hospital's activities functioned, for the main part, round the Chest, Plastic, and Maxillo-Facial Units.

Beds available for cases were reduced to an average of 200 by the end of the year. This was due to the setting aside of several pavilions for the treatment of tuberculous service cases as mentioned in the report on Baguley Sanatorium, and also to nursing staff shortages.

The resident medical staff consists of :—

2 Surgical Officers.
2 Medical Officers.
1 Anaesthetist.

There are also 2 Resident Dental Officers.

Admissions and Discharges.

	Civilian patients	Service patients
Number of patients—		
In hospital, 1st January	39	194
Admitted during the year	737	579
Discharged " " "	705	757
Died " " "	20	1
In hospital, 31st December	51	15
Daily average number of beds occupied	88	64
Average length of stay of patients who have been discharged—in days	44	38
Average length of time in hospital of fatal cases—in days—		
Male	42	59
Female	40	—
Case mortality	·027	·001

Age Analysis of Cases—On Admission.

Service Cases.

Ages	Chest	Plastic	Jaw	* Others	Total
18—24	21	55	30	123	229
25—34	32	52	28	142	254
35—44	10	23	11	41	85
45—54	2	—	—	9	11
	65	130	69	315	579

Civilian Cases.

Ages	Chest	Plastic	Jaw	* Others	Total
10—14	22	70	15	7	114
15—24	40	93	28	10	171
25—34	31	106	80	8	225
35—44	30	41	56	3	130
45—54	10	22	24	2	58
55 and over	11	16	12	—	39
	144	348	215	30	737

* The majority of these cases were for the General Medical and Surgical Departments which were closed during the year, or were admitted from ambulance trains for a day or two pending disposal elsewhere.

The civilian cases included members of the resident staff.

Chest Unit Report.

The Director and Surgeon, A. Graham Bryce, F.R.C.S., is assisted by 2 Visiting Surgeons, one of whom is an E.N.T. Specialist, 1 Visiting Physician, 1 Resident Medical Officer, and 1 Visiting Anaesthetist. There is also a Consultant Surgical Registrar.

Admissions.

Chest cases admitted	209

Analysis.

Bronchiectasis	90
N.Y.D. Bronchiectasis	11
Chronic Empyema	19
Lung Abscess	9
Congenital Cystic Lung	2
Asthma	7
Haemoptysis—for investigation	7
Pleural Effusion	10
Chronic Bronchitis	8
Purulent Bronchitis	1
Pneumonia	8
Chronic Tonsillitis	1
Pulmonary Tuberculosis	5
Pleurisy	1
Pneumonitis	1
Nasal Sinusitis	1
Gunshot Wound—Chest	2
Crush injury to Chest	1
Foreign body in lung	1
Carcinoma Bronchus	6
Dermoid Cyst of Lung	1
Ganglioneuroma	1
Mediastinal Tumour	1
Mediastinal Cyst	2
Hydatid Cyst of Mediastinum	1
Bronchial Neoplasm	1
Broncho-stenosis	1
Atresia of Lung	1
Collapsed Lobe	3
Mediastinal Glands	1
Lobectomy—follow-up	2
Appendix Abscess	1
Fibrosis of Lung	1
Intercostal Neuralgia following old Thoracotomy for diaphragmatic hernia	1
Total	209

Operations performed in the Chest Theatre, 1946.

Thoracotomies for—		
Removal of bullet	1	
Carcinoma	4	
Lung Abscess	1	
Cystic Lung	2	
Empyema	2	
Bronchiectasis	4	
Removal of Cyst	5	
		19
Pneumonectomy		6
Lobectomy		29
Bronchoscopy		96
Rib Resection		8
Thoracoplasty		13
Muscle Graft and plastic operation to close Bronchial Fistula		5
Eloesser Flap Drainage		1
Theatre Dressings, and other minor chest and non-chest conditions		12
Total		189

Minor operations, such as the removal of foreign bodies under local anaesthetic and intercostal drainage, are not included in these figures.

Follow-up of Cases.

(*a*) Referred to Mr. Graham Bryce's Out-patients' Clinic at the Manchester Royal Infirmary.

(*b*) Attend Baguley Emergency Hospital at regular intervals.

(*c*) Referred to the Ministry of Pensions to be seen at a Chest Centre near their homes.

(*d*) Referred to their local Tuberculosis Officer.

Plastic and Maxillo-Facial Unit.

Director : Professor F. C. Wilkinson, M.SC., M.D., D.D.SC.

Mr. A. H. R. Champion, M.B.E., F.R.C.S., is Surgeon-in-Charge of the Plastic Unit, assisted by two Resident Surgical Officers. The Dental Officer in charge of the Dental Department of the Unit is Mr. A. Weldon Moule, and he is assisted by two Resident Dental Officers. One Resident Anaesthetist and visiting Anaesthetist complete the Medical and Dental staff of the Unit.

Total Admissions	Plastic	Dental	Total
Service cases	130	69	199
Pensioners	193	85	278
Civilians	155	130	285
	478	284	762
New cases admitted for the first time	266	174	440
Deaths during the year	2	..	2
Total operations performed	749	174 *	923
Number of Out-patients' visits to the Clinic	1,091	486	1,577

* Includes 84 done in conjunction with a Surgeon, but excludes ordinary extractions.

Burns Cases (included in the figures for the Plastic Unit in the above table).

	Males	*Females*
Number of healed burns cases admitted ..	87	43
New burns cases admitted	28	21
	115	64
Total ..	179	

Age Analysis of Burns Cases.

Ages	Males				Females			
	Service		Civilian		Service		Civilian	
	Old	New	Old	New	Old	New	Old	New
0—14	..	..	12	9	..	..	17	12
15—24	15	1	22	2	..	..	11	2
25—34	9	1	12	4	..	..	8	4
35—44	9	1	4	3	..	..	3	1
45—54	..	..	3	5	..	..	1	1
55 and over ..	..	..	1	2	..	..	3	1
Totals	33	3	54	25	..	..	43	21

Jaw Injuries Unit.

Analysis of new cases treated :—		
Injuries to facial bones	85	
Diseases of the jaw	100	
Ancillary to plastic	77	
Special review and investigations	22	
		284
No. of treatments given to Maxillo-Facial patients ..		5,684
Operations, excluding ordinary extractions—		
Bone grafts	5	
Fractures, Cysts, etc.	142	
Epithelial Inlays	27	
		174
Special Prothesis inserted—		
Sub Nasal	5	
Palsy	6	
Obturators	15	
Gold and Acrylic	21	
Others, oral	118	
		165

Special moulds inserted—		
General	50	
Nasal	6	
Orbital	25	
	—	81
Splints used		186
Artificial eyes inserted		6

Photographic Section—		
Photographs taken		4,753
Prints processed (routine)	16,700	
Special experiments, enlargements, and transparencies	1,246	
	——	17,946

ental X-ray Section :—

Antero-posterior	257	
Laterals	590	
Intra-orals	240	
Occlusals	182	
Special	6	
	——	1,275

ental Section.

Number of patients examined (excluding jaw injuries)	698
Number of extractions	423
Number of fillings	186
Number of bridges	1
Number scaled and polished	188
Number of gum treatments	45
Number of dentures (ordinary)	16
Number of repairs	35
Not requiring treatment	281

nalysis.

Dental operation	Maxillo-Facial Patients	Plastic Patients	Chest and other Patients	Staff	Total
tractions	252	69	51	51	423
lings	16	57	76	37	186
idges	..	..	..	1	1
m treatment	3	9	11	22	45
ntures (ordinary)	..	7	8	1	16

Pathological.

The pathological work of the Hospital, as in the case of the Sanatorium, is under the direction of the Director of Pathological Services.

The following is a brief resume of the tests done and examinations carried out :—

Swabs	120	
Sputum	1,144	
Blood	2,282	
Urine	137	
Faeces	163	
Cerebro-spinal fluid	11	
Pus and Effusions	806	
Fractional gastric content	23	
Penicillin Sensitivity Tests	42	
Penicillin Estimation Fluids	67	
Others	13	
		4,808

Radiological.

Dr. G. Q. Chance, D.M.R.E., was visiting Radiologist. Details of skiagrams taken are as follows :—

Chest	1,692	
Sinuses	141	
Bronchograms	164	
Sinograms	57	
Barium Meals	130	
Mandibles	82	
Facial	66	
Orthopaedic	207	
Others	49	
		2,588

An additional 890 films were taken for the Christie Cancer Hospital Unit in the Emergency Hospital.

Physiotherapy.

Total treatments	11,570
Average number of patients each month	89
Average number of treatments per patient each month	11

Occupational Therapy.

This has been mainly diversional, and as the finished products were mainly articles in short supply, individual patients have had no difficulty in disposing of them. It appears doubtful that this principle would prove satisfactory under normal conditions. In purely curative occupational therapy, the onus of disposal of the finished product should not necessarily rest on the patient, as it is possible that the most suitable craft for his disability may not be a profitable one. The principle of payment for work done under any scheme of curative occupational therapy should not be contemplated.

For a considerable part of the year this most important section has been dependent upon voluntary help to keep it going.

ducation.

There is not much enthusiasm amongst service cases and none at all amongst ivilian patients.

hysical Training.

This was mainly confined to chest cases and was controlled by the physio-herapist.

ecreation.

The facilities at present afforded almost suffice, as separate accommodation xists for the Military Wing patients.

This opportunity is taken to thank, once again, all those who provided resents, parties, and entertainments for the patients during the year.

taff.

Similar to most other hospitals there is an acute shortage of nurses. The upply of Hospital Helpers varies, but has improved when compared with the ast.

The number of attendances of nursing staff reporting sick totalled 149; he number admitted to the sick bay was 19. The total duty days lost amounted o 296, giving an average per patient of 15½. Details of these cases in tabulated orm are :—

Type of Case	Number of Cases	Total number days lost	Average number days lost
nsillitis	8	85	10½
lds	3	27	9
arlet Fever	1	38	38
dominal complaints	3	91	30
mphoedema	1	21	21
ands of neck	1	18	18
jury of leg	1	10	10
nusitis	1	6	6

onclusion.

Though the number of beds occupied has shown a decrease, the hospital has ad a very active year, as can be deduced from the numerical records that ccupy most of this report.

BOOTH HALL HOSPITAL.

By Dr. W. H. Patterson, Medical Superintendent.

Staff.

(a) *Visiting Consultants*—

J. F. Ward, M.D., F.R.C.P.	Physician	
Sylvia K. Guthrie, M.D., M.R.C.P.	Physician	
N. G. Godfrey, M.B., B.S., F.R.C.S.	Surgeon	
W. Bryce McKelvie, M.D., CH.M., F.R.C.S., D.L.O.	Ear, nose, and throat surgeon	
W. Sayle Creer, M.B., M.CH., F.R.C.S.	Orthopaedic surgeon	
Sydney B. Smith, M.R.C.S., L.R.C.P., D.O.M.S.	Ophthalmologist	
J. White, M.B., CH.B., D.M.R.E.	Radiologist	
E. Marianne Peach, M.D., D.P.H.	Dermatologist	
G. Whitehead, M.B., CH.B.	Venereologist	
J. C. Nicholson, M.B., CH.B., D.A.	Anaesthetist	
H. P. Taylor, L.D.S.	Dentist	
B. P. Robinson, M.B., CH.B., F.R.C.S.	Ear, nose, and throat surgeon	*
H. P. Lawson, F.R.C.S., D.L.O., L.D.S.R.C.S.	Ear, nose, and throat surgeon	
H. J. Brennan, M.D., D.A.	Anaesthetist	
Olive M. Gimson, M.B., CH.B.	Anaesthetist	
J. C. Nicholson, M.B., CH.B., D.A.	Anaesthetist	

* For the Education Committee's tonsils and adenoids surgical service.

(b) *Full time.*

W. H. Patterson, M.D., D.C.H.	Medical Superintendent
A. E. Buckwold, M.D., D.C.H.	Deputy Medical Superintendent
G. T. Watts, M.B., CH.B.	Resident Surgical Officer
A. E. Hall, M.R.C.S., L.R.C.P.	Resident Assistant Medical Officer
A. M. Macleod, M.B., CH.B.	Resident Assistant Medical Officer
Jean Guy, M.B., CH.B.	Resident Assistant Medical Officer
Marjorie Wright, M.B., B.S.	Resident Assistant Medical Officer
Christina K. Lees, S.R.N., S.C.M., R.F.N.	Matron
H. Taylor	Secretary-Steward

General.

In most respects the year under review has been an average one in so far as the general and departmental work is concerned. The figures, while but a poor gauge for measuring work done, provide little evidence of upward or downward trends of significance. Recruitment of nursing staff has given rise to anxiety. Enthusiasm for the development of the hospital's usefulness in the community is increasingly curbed by the realities of staffing difficulties.

Out-patient attendances have continued to increase and are 295 above last year's figures.

The area served by the hospital was involved in the general increase in the country of gastro-enteritis. The deaths in which this condition was a main or contributory factor are nearly three times those of 1945. Many infants were beyond hope of recovery when admitted, but even so the problem of this illness (which is not new) is by far the most difficult of those met with in infants under one year. In the present state of our knowledge the sheet anchor of treatment is constant nursing attention of a skilled type. To be adequately cared for one such ill infant will, over a twenty-four hour period, require eight hours of personal nursing attention. Simple calculation will give some idea of the nurse-hours required in handling even small groups of infants with this disease. With limited staff saturation point is quickly reached and efficiency decreases rapidly.

From a fund accumulated as a result of entirely unsolicited donations, the hospital purchased two small ponies. The engineering staff were ingenious in improvising a little carriage to hold a dozen youngsters. By this means convalescent and long-stay patients were able to get out in the grounds. Those by whose generosity the ponies were obtained will be glad to know that not only is great pleasure given to the children but the outings are quite definitely helpful in their treatment and recovery.

It is considered worthy of note that the Infant Diet Kitchen, completed in 1939, is still a model of its kind. Hospitals from all parts of the British Isles have sent representatives to see the unit, and many others have had information and copies of the plans.

The new Premature Infant Unit was completed by December, 1946. It has some unique features, but owing to shortage of staff it has not been possible to put the department into action. The ratio of staff to patients is very high in the nursing of premature infants.

Statistics.

Patients treated as in-patients	5,833
Patients treated as out-patients	2,610
Patients admitted	5,466
Duration of stay (days)	20
Deaths (all ages)	267

Deaths.

Age groups—

4 weeks and under	74
5 weeks to 1 year	133
Over 1 year	60

24 deaths were the result of incurable congenital defects.

15 patients died of tuberculous meningitis.

Infectious Diseases.

The following 160 cases of infectious diseases were wittingly or unwittingly admitted during the year :—

Sonne Dysentery	49
Whooping Cough	45
Chickenpox	30
Measles	18
Cerebro-spinal fever	13
Scarlet Fever	2
Diphtheria	2
Typhoid Fever	1

50 secondary cases developed from these.

Departments.

Casualty and After-Care Department.

Attendances	1946		1945	
	Children	Over 16 years	Children	Over 16 years
First Attendances	2,332	262	2,026	267
Subsequent Attendances ..	5,091	333	5,847	417
	7,423	595	7,873	684

In addition 16 Emergency Medical Service cases attended and made 24 subsequent attendances.

	1946	1945
Patients subsequently admitted to hospital	343	253
Adult patients transferred to other hospitals	125	77
Road accidents	44	27

Surgical Department.

	1946	1945
Operations performed in theatre	2,319	2,093
General surgical emergencies	246	260

Some operation details :—

	* Performed by Consultant Staff	† Performed by Resident Surgical Officer
Pyloric stenosis	1	7
Intussusception	1	15
Intestinal obstruction from other causes	8	8
Appendicitis	10	122
Appendicitis and General Peritonitis	1	78
Osteomyelitis	4	42
Hernia	1	38
Empyema	1	12
Mastoid:—		
(i.) Simple	2	24
(ii.) Radical	7	..
Total	36	346

Ear, Nose, and Throat Department.

	1946	1945
Patients examined by Aurist .. .. (In-patients 447, out-patients 462)	909	1,004
Specially examined in wards	12	61
Tonsils and Adenoids operations (Hospital Aurist)	363	355
Tonsils and Adenoids Operations (Education Authority Aurists)	1,072	875

Ophthalmic Department.

There were 19 patients seen by the Ophthalmic Surgeon, the total attendances being 22.

Dental Department.

	In-patients	Out-patients	1946	1945
			Total	Total
Patients treated	848	28	876	859
Patients inspected..	..	..	2,078	2,038
Extractions :—				
Under general anaesthetic	66	..	..	..
Under N_2O Gas..	187	10	..	..
Under local anaesthetic	65	4	332	264
Fillings	249	12	261	234
Special gum treatments	77	4	81	61
Other conservative treatment	227	10	237	..

Of the total treatments 320 in-patients and 13 out-patients were under the age of 8 years, and 528 in-patients and 15 out-patients were over 8 years.

X-Ray Department.

	1946			1945		
	In-patients	Out-patients	Total	In-patients	Out-patients	Total
Patients radiographed ..	2,828	1,129	3,957	2,801	798	3,599
Films exposed	..	..	8,624	..	..	6,961

Physiotherapy Department.

	1946			1945		
	In-patients	Out-patients	Attendances	In-patients	Out-patients	Attendances
Ultra Violet Light treatments	183	92	2,592	392	151	5,192
Massage treatments	201	125	3,253	256	102	3,646
Electrical treatments	182	32	1,714	111	33	1,200

Almoner's Department.

	1946	1945
Out-patient attendances	8,058	8,557
Convalescences arranged	215	240
Extra nourishment cases	118	145
Transports and escorts arranged	242	173
Home visits paid by Almoner	178	140
Special schooling arranged	16	14
Referred to other clinics or to district nurses	52	73
Transfers to residential nurseries	64	89
Transfers to day nurseries or foster-mothers (including 9 for whom adoption has been arranged)	14	19
Referred to statutory or voluntary bodies—		
For supervision or reports	97	235
For help with appliances	30	16
For assistance with clothing	8	70

Other help arranged in 126 cases.

Nursing Staff.

50 New students entered in 1946. 22 nurses left in trial period, 23 nurses left after trial period but without completing training, and 23 nurses completed their training.

State Examination Results.

	Entries	Passes	Failures
Preliminary	31	22	9
Final	25	23	2

Staff Sickness.

197 nurses were off duty through illness and accident, the total days lost being 2,194.

CRUMPSALL HOSPITAL.

By Dr. W. A. Ramsay, Medical Superintendent.

STAFF.

(*a*) *Visiting Consultants*—

C. S. D. Don, M.D., F.R.C.P.	Senior Physician
H. R. J. Donald, B.M., B.CH., M.R.C.P.	Physician
R. W. Luxton, M.D., M.R.C.P.	Physician
F. H. Scotson, M.B., B.S., F.R.C.S.	Surgeon
D. S. Poole Wilson, M.B., M.CH., B.A.O., F.R.C.S.	Surgeon
T. Moore, M.D., M.S., F.R.C.S.	Surgeon
Mary Evans, M.D., M.R.C.O.G.	Obstetrician and gynaecologist
B. P. Robinson, M.B., CH.B., F.R.C.S.	Ear, nose, and throat surgeon
S. M. Milner, M.A., M.B., B.CH., F.R.C.S.	Orthopaedic surgeon
L. Wertheim, M.R.C.S., L.R.C.P.	Dermatologist
S. B. Smith, M.R.C.S., L.R.C.P., D.O.M.S.	Ophthalmologist
A. A. Dunlevy, M.B., B.CH., B.A.O., D.M.R.E.	Radiologist
Gordon Whitehead, M.B., CH.B.	Venereologist
H. J. Brennan, M.D., D.A.	Anaesthetist
Olive Gimson, M.B., CH.B.	Anaesthetist
‡ P. Steiner, M.D. (Vienna)	Visiting Medical Officer to Annexe
W. C. Mellor, L.D.S.	Dentist

(b) *Full time.*

W. A. Ramsay, T.D., M.A., M.D.	Medical Superintendent
D. W. Macartney, M.D., D.P.H.	Deputy Medical Superintendent
A. M. L. Smith, M.B., CH.B., F.R.C.S.	Resident Surgical Officer
Mary U. Wilkin, M.B., B.S., D.R.C.O.G.	Resident Obstetrical Officer
Ellen Joyce, M.B., B.CH., B.A.O.	Resident Anaesthetist
P. R. J. Williams, B.SC., M.B., CH.B.	Resident Assistant Surgical Officer
J. C. A. Renshaw, M.B., CH.B.	Resident Assistant Obstetrical Officer
D. K. Gilmour, M.B., B.CH., B.A.O.	Resident Assistant Anaesthetist
E. C. Hutchinson, M.B., CH.B.	Senior Resident Assistant Medical Officer
Helen Kay, M.B., CH.B., D.P.H.	House Officer (Maternity)
J. F. Booth, M.B., B.CH., B.A.O.	House Officer (Medical)
Christine J. T. Jamieson, M.R.C.S., L.R.C.P.	House Officer (Medical)
Theresa P. Lee, M.B., CH.B.	House Officer (Surgical)
A. Meyer, M.D. (Bologna)	House Officer (Medical)
J. S. Salem, M.R.C.S., L.R.C.P.	House Officer (Medical)
T. T. Swan, M.B., CH.B.	House Officer (Surgical)
Eva M. Hillier, S.R.N., S.C.M.	Matron
A. T. Sampson, F.H.A.	Secretary-Steward

‡ Obit 7.6.47

General.

The year has been marked by an ever increasing difficulty in finding accommodation for patients recommended for admission. Of the beds available before the war, 108 (4 wards) are now being utilised for other purposes and 144 (5 wards) are not in use owing to nursing and domestic difficulties. The proportion of elderly and senile patients admitted has risen because of the inability or unwillingness of relatives to care for them at home. During the winter months as many as 50 patients have sometimes been awaiting admission, apart from those recommended from the out-patient department. Larger numbers of the chronic sick could be nursed in the Hospital Annexe and in the sick wards of Park House if assistant nurses or nursing attendants would come forward in adequate numbers. It is obvious that the larger schemes of hospital planning will fail unless the nursing problem is solved or its acuity lessened.

A total of 14,240 patients were admitted to hospital. Of these 1,178 were Service patients. At the end of the year there were still 75 beds reserved for E.M.S. purposes.

Surgical Department.

The total number of operations in the operating theatres was 3,245. Of these, 1,603 operations were performed by the visiting staff. Emergency operations, included above, totalled 445. General classification of operations is as follows :—

Skin and superficial structures	502
Thorax and chest wall	13
Orthopaedic	188
Ductless glands	23
Hernia	256
Abdominal	729
Rectal	186
Genito-urinary	434
Dental (in main theatre)	74
Gynaecological, including Caesarean Section	1,117
Ear, nose, and throat	128

Consultant Clinics.

These clinics continue to be of service to patients and practitioners in the neighbourhood, at the same time saving the unnecessary use of hospital beds. The out-patient department consists of an improvised ward but it is hoped to provide a new department when building becomes feasible.

	New patients	Attendances
Medical	461	1,030
Surgical	585	1,177
Gynaecological	709	1,615
Dermatological	105	634

Special Departments.

Dental	247	908
Ear, nose, and throat	236	830
Eye	116	179
Genito-urinary	—	271
Orthopaedic	342	1,101
Diabetic	29	745
Surgical follow-up	—	1,027
Occupational therapy	123	2,685
Chiropody	65	424
Out-patient dressings	338	3,599

X-Ray Department.

This department is now in the course of expansion and additional equipment is being purchased. It is certain that within a few years entirely new accommodation will be required.

In-patients examined	4,463	
Out-patients examined	1,572	
		6,035
Special examinations :—		
Alimentary tract		775
Renal tract		476
Chest		3,828
Gall bladder		130
General		2,496
Total examinations		7,705
Examinations with Mobile Unit in the Wards		649

Physiotherapy Department.

In-patients—

New patients	758
Attendances	24,976
Treatments	36,576

Out-patients—

New patients	745
Attendances	16,196
Treatments	28,590

Almoner's Department.

This is the first full year in which the department has worked with a full staff of four trained almoners. Every out-patient and every in-patient has been interviewed during this period, which has meant a big increase in the amount of social work done. The almoners have been able to find patients' problems themselves, so that the department has not been absolutely dependent on the medical and nursing staff for the discovery of patients' difficulties. The fact that every patient was known personally to one of the department and a fair knowledge of background and circumstances was already there, has caused a considerable improvement in the co-operation between medical and nursing staffs and the almoners.

260 convalescences have been recommended and arranged. 104 surgical appliances has been provided.

The department took part in an experimental training of Disablement Rehabilitation Officers of the Ministry of Labour, arranged by Professor Lane. For two weeks two teams of D.R.O.'s from a wide area, including South Wales and Derbyshire, came daily to the hospital, were interested spectators at Clinics and ward rounds and discussed cases of interest to their work with medical staff and the almoners. This led to clearer realisation of each other's difficulties and a closer co-operation with the Ministry of Labour.

Despite the fact that the war has been over for some time there is still a very necessary close co-operation between the welfare departments of the three services and the almoners. Over 50 applications were made for extensions of leave and compassionate postings.

Much work has been done in interviewing relatives of all patients recommended for transfer to the Annexe. In a small percentage of cases alternative arrangements have been made possible. It is a sad comment on the present day that so many older people are refused a home by relatives, often by sons and daughters, who do not wish to be inconvenienced.

Material help has been given to several patients who had not sufficient clothing. The W.V.S. have also been very helpful in this way.

The Maternity Department has been very busy ; more bookings has meant more ante-natal patients to interview and more in-patients to see. The common problems of caring for other children, compassionate leaves for husbands, accommodation, home helps, etc., have been dealt with. The number of unmarried mothers interviewed was 157. This figure does not include married women with illegitimate babies ; their problems are even more complicated, often involving the danger of breaking up a home where there are several children. These women are often referred to the Marriage Guidance Officers and Moral Welfare Workers for advice.

The V.D. ward has provided a great deal of work. 150 patients have been seen and, where possible, helped. It is, perhaps, interesting to note that 25 of them were referred for treatment by the police. On discharge 22 were dealt with by Probation Officers and 21 by Moral Welfare Workers. 23 girls were transferred to some sort of hostel or home and 10 to approved schools. This surely shows the need for a hostel run by the local authority.

With the increase of staff the number of visits to patients' homes has also increased. The personal contact with either the patient or relatives in their own environment is a great asset in working out plans with them to overcome some difficulty. It is also useful from a medical viewpoint—in giving an accurate description of influences, circumstances, and material hardships that may account for a great part of the patients' psychological outlook. More use could be made by the medical staff of this knowledge. In many cases it would help in dealing with a patient if his whole background and condition of life could be seen at first hand.

3 students have completed part of their training in the department and a number of University Social Science students have done some of their practical work at Crumpsall.

Statistics.

3,687 patients made 19,138 attendances. 1,159 of these were E.M.S. (including 85 P.O.W.'S).

3,623 patients made 11,588 attendances at the ante-natal clinic.

1,708 attendances were made at the gynaecological clinic.

1,100 attendances were made at the post-natal clinic.

£	s.	d.	
374	19	0	was claimed from Hospital funds.
104	11	11	was collected towards the cost of appliances.
34	11	8	was collected from out-patients for treatment.
£514	2	7	

Casualty Department.

890 accident cases were attended to in the Receiving Ward, 413 of them being admitted as in-patients.

Nursing Staff.

The health of the nursing staff has been pretty good during the year, apart from minor illnesses such as pharyngitis and influenza. Recruitment has not been as good as we should have liked, but we have been able to provide a reasonable nursing service, within certain limits.

Examination Results.

	Successful	*Failed*
Hospital Final	34	3
State Final	29	2
State Preliminary, Part I.	58	4
,, Part II.	19	1
Central Midwives Board, Part I. ..	51	6
Housekeeping Course	4	0

Crumpsall Hospital has now become an Approved Training School for male nurses and nurses are now in training. An intensive course of training for nursing orderlies from the services has also commenced. These candidates are allowed to become State Registered, under certain conditions, after one year's training in an Approved Training School.

Domestic Staff.

The domestic situation in the wards has been greatly alleviated by the recruitment of ward orderlies to relieve the nursing staff of essentially domestic duties. Difficulty has, however, been experienced in obtaining domestic help in other departments. In the Nurses' dining room this has been successfully met by the appointment of male waiters. Men are also employed in the laundry and cleaning passages and corridors.

New Equipment and Structural Alterations.

Central heating in the Limbert Nurses' Home has been extended to all the bedrooooms.

Additional rooms have been provided for resident medical officers and a new consultant room has been provided in the out-patient department.

All air raid shelters, blast walls, etc., have been removed.

Maternity Department.

During 1946 a larger number of women were admitted to the department than in any previous year. The number of women treated in the department was 3,097. Of these, 2,877 were booked cases (*i.e.*, had attended the hospital ante-natal clinic) and 220 were emergency cases.

The booked cases comprised the following:—

	Primipara	Multipara	Total
Patients delivered at or near term..	1,701	1,137	2,838
*Patients delivered before the 28th week	3	2	5
Patients admitted after delivery	7	25	32
Died undelivered	1	1	2
	1,712	1,165	2,877

* The majority of these cases (*i.e.*, abortions) are treated in the gynaecological wards.

The emergency cases comprised the following :—

	Primipara	Multipara	Total
Patients delivered at or near term..	80	109	189
Patients delivered before the 28th week	4	2	6
Patients admitted after delivery	6	19	25
	90	130	220

* The majority of these cases (*i.e.*, abortions) are treated in the gynaecological wards.

Maternal Mortality.

There were 6 deaths among the patients treated in the department. Of these, 3 were in booked cases and 3 in emergency cases.

(A) *Booked Cases*—

Patient admitted moribund. Post mortem showed death due to uraemia resulting from acute nephritis due to a septic throat.

Pulmonary oedema following operation for obstructed labour. Post mortem refused.

Obstetric shock following difficult labour and contraction ring. Post mortem showed severe degree of myocardial degeneration and gross obesity.

(B) *Emergency Cases*—

Placenta praevia.

Subacute bacterical endocarditis.

Severe pre-eclampsia and twin-delivery. P.M. showed the typical findings of eclampsia though no fits had occurred.

Total number of women delivered	3,027
Number of twin deliveries	50
Total number of births (live and still)	3,077

Maternal mortality rate—6 in 3,077=1·95 per 1,000 births (live and still)

Maternal Morbidity.

Morbidity is reckoned according to the Ministry of Health standard. By that standard 15 cases were notifiable in addition to the 6 deaths.

The maternal morbidity totalled 21 cases out of 3,097 women treated in the department, giving a morbidity rate of 6.75 per 1,000.

Summary of Abnormal Labour.

Abnormal Presentations—

	No. of Cases
Occipito—posterior, persistent or incompletely rotated	74
Face	6
Brow	3
Breech	126
Shoulder	22
Twin	50

Complications—

Ante-partum haemorrhage (*a*) placenta praevia	18
(*b*) accidental	15
Post-partum haemorrhage	91
Inversion of uterus	1
Eclampsia	10
Cardiac disease	53

Operations Performed—

Caesarian Section	70
(*a*) Lower segment—55. (Sterilization in 10)	
(*b*) Upper segment—15. (Myomectomy in 1)	
Forceps	182
Craniotomy	4
Manual removal of placenta	45
Version under anaesthesia (*a*) external	24
(*b*) internal	11
Induction of labour (*a*) medicinal	2
(*b*) combined medicinal and A.R.M.	36
(*c*) bougie	6
Abdominal hysterotomy	1
Therapeutic abortion by bougies	1
Ovariotomy in pregnancy	1

Blood and Plasma Transfusion.

Since February, 1946, the blood groups and Rhesus factors have been determined on every patient at her first attendance at the ante-natal clinic. The number of women receiving blood transfusion was 42. Of these, 29 received blood only and 13 received plasma and blood.

In-patient Ante-natal Treatment.

During the year 310 women were admitted to the ante-natal ward for treatment and later delivered in the hospital. Some of the conditions for which they received treatment are enumerated below:—

	No. of Cases
Toxaemia	100
Hypertension	37
Cardiac disease	28
Urinary infections	16
Anaemia	8
Other conditions	121
	310

Infants' Report.

Premature Infants.

327 of the infants born alive were premature, *i.e.*, weighed 5½ lbs. or less. In addition, 12 premature infants were admitted after being delivered at home. The total number of premature infants, therefore, nursed in the hospital was 339. Of these, 66 died in hospital. This gives a neo-natal death rate among premature infants of 19·46 per cent.

Stillbirths.

	Full term	*Premature*	
Booked	40	40	
Emergency	15	21	Total—116

Total number of births (alive and still)=3,077.

Still birth rate=37·7 per thousand.

Neo-natal Deaths.

	Full term	*Premature*	
Booked	24	34	
Emergency	2	26	Total—86

Total number of infants born alive=2,961.

Neo-natal death rate=29·04 per thousand.

The premature infants are all fed on breast milk. During the year the department also supplied:—

70 pints 11ozs. to Booth Hall Hospital.

71 pints 2ozs. to Pendlebury Hospital.

LANGHO COLONY FOR SANE EPILEPTICS.

By Dr. Beresford T. Richards, Medical Superintendent.

STAFF.

Full time—

Beresford T. Richards, M.R.C.S., L.R.C.P., D.P.M.	Medical Superintendent
Mrs. A. J. Green, R.M.P.A.	Matron
H. H. Miller, M.B.E.	Secretary-Steward

At the end of 1946 there were maintained in the Colony 256 male and 280 female colonists, of whom 262 were chargeable to the Manchester Corporation and 274 to other Authorities, as under :—

County Boroughs.	
Barrow-in-Furness	2
Blackburn	21
Blackpool	6
Bolton	8
Bootle	3
Bradford	1
Burnley	10
Croydon	2
Ipswich	4
Liverpool	17
Newcastle	1
Oldham	4
Preston	3
Salford	23
Wallasey	1
Warrington	4
Wigan	1
	111

County Councils, etc.	
Cheshire	6
Durham	1
East Suffolk	2
Glamorgan	3
Lancashire	128
Middlesex	4
Monmouth	1
Surrey	5
Sussex, East	1
Sussex, West	—
Yorkshire, North Riding	1
Yorkshire, West Riding	10
States of Guernsey	1
	163

Total : 274

The total number of epileptic seizures during the year was 36,661.

	Severe	Slight	Total	No. of Patients	Average
Male	11,797	5,909	17,706	256	69
Female	8,841	10,114	18,955	280	68
Total	20,639	16,023	36,661	536	68

The following classification of the incidence of seizures is interesting :—

	Males	Females
Decreased incidence	40	8
Increased incidence	91	21
No change	100	208
No seizures during the year	39	37
Unclassified (including recent admissions and non-epileptics)	16	--

19 colonists died during the year. 16 fractures occurred.

The employment of colonists on 31st December, 1946, was as follows :—

	Males	Females
Domestic—The Homes	103	154
,, ,, Light Work	33	—
,, —Administrative Block	9	22
Tailor's Shop	1	—
Shoemaker's Shop	4	—
Engineering	3	—
General Stores	6	—
General Kitchen	1	14
Laundry	2	25
Medical Superintendent's Garden	4	—
Farms	17	—
Kitchen Garden	8	—
Grounds	40	—
Coal Yard and Wood Shed	9	—
Clerk of Works	5	—
Sewing Room	—	27
Sick and unemployable	11	38
	256	280

A number of colonists have been discharged and have been able to obtain remunerative employment.

There has been a steady deterioration in the type of case being admitted ; this, coupled with the discharge of many of the better colonists, is leaving a more chronic type in the Homes.

The shortage of female attendants has thrown a very great strain on the remaining staff. One home on the female side has had to be closed and there is not enough female staff to reopen it. This is causing congestion in the other Homes. No " other authority " cases have been admitted since this closure became necessary.

MONSALL HOSPITAL.

By Dr. D. C. Liddle, Medical Superintendent.

STAFF.

(a) *Visiting Consultants.*

E. S. Burt Hamilton, M.C., M.B., CH.B., F.R.C.S.	Ear, nose, and throat surgeon
W. Bryce McKelvie, M.D., CH.M., F.R.C.S., D.L.O.	Ear, nose, and throat surgeon
J. White, M.B., CH.B., D.M.R.E.	Radiologist

(b) *Full time—*

D. C. Liddle, M.B., CH.B.	Medical Superintendent
W. Sharpe, M.B., CH.B., D.P.H.	Deputy Medical Superintendent
Cecilia M. Robinson, M.B., CH.B.	Resident Assistant Medical Officer
Margaret A. Barber, M.B., CH.B.	Resident Assistant Medical Officer
J. H. Hilditch, M.B., CH.B.	Assistant Medical Officer (Supernumerary)
Janet B. C. Orchardson, M.B.E., A.R.R.C., S.R.N.	Matron
C. Johnson	Secretary-Steward

General.

At the close of the year 1945, 133 patients remained in hospital. During 1946, 2,104 were admitted. The total number under treatment during the year was 2,237. There were 60 deaths and 2,060 were discharged cured. 117 remained in hospital at the end of the year.

The largest total number of cases admitted to hospital was during the month of January, when 204 cases were received. The maximum number of patients in hospital was 179 on March 16th and the minimum number was 100 on August 31st.

The average daily number of patients in hospital for the year was 135·1, as against 189·3 in the year 1945.

The average duration of stay for each patient was 23·3 days, as against 25·1 in 1945.

The fatality percentage for all cases under treatment was 2·6, as compared with 1·7 during 1945.

In 478 cases, or 22·5 per cent., the diagnosis was altered from the disease notified.

Scarlet Fever.

21 cases remained in hospital at the end of the previous year, and during the year 449 were admitted, showing a decrease of 374 on the previous year. The number of discharges was 448 and there were no deaths.

The average stay in hospital was 20·2 days, showing a decrease of 5·6 days in the previous year.

Complications in Scarlet Fever.

Complication	Number	Percentage
torrhoea	13	2·9
lbuminuria in Convalescence	1	0·2
denitis	4	0·9

Active Immunization against diphtheria in patients admitted to Hospital suffering from Scarlet Fever.

Patients who were Schick positive were immunized against diphtheria.

Scarlet Fever Return Cases.

The number of cases of scarlet fever discharged from hospital was 448. True return cases numbered 6, the return case percentage being 1·3, as against 0·8 per cent. for 1945.

The average duration of stay in hospital of cases giving rise to secondary cases was 19·2 days. The average interval elapsing between the discharge of the primary case from hospital and the onset of the disease in the secondary case was 9·5.

Diphtheria.

The number of patients admitted with diphtheria was 400 as against 481 in 1945, showing a decrease of 18. The total number under treatment was 462. There were 419 discharges and 12 deaths ; 3 deaths occurred within 48 hours of admission. The gross fatality percentage was 2·8 as against 2·9 during the previous year, or 2·1 excluding the 3 deaths referred to. None of the deaths occurred in immunised patients.

79 cases out of the total were diagnosed as diphtheria carriers ; excluding these carrier cases the fatality percentage is 3·4.

The average stay in hospital of the patients who recovered was 39·4 days and for fatal cases 5·3 days.

237 cases certified diphtheria were found to be suffering from some other disease ; 1 of these cases proved fatal.

Laryngeal Diphtheria.

10 cases of laryngeal diphtheria were admitted during the year. 4 cases required tracheotomy ; 3 of them recovered and the remaining 1 died.

Diphtheria Cases—352.

(excluding 79 carriers)

Age Incidence	Number	Percentage	Percentage of Deaths
0—5 years	53	15·1	7·5
5—10 ,,	128	36·4	5·5
10—15 ,,	77	21·9	—
15—20 ,,	30	8·5	3·3
20+ ,,	64	18·2	—

Complications in Diphtheria.

Complication	Number	Percentage
Palatal paresis	16	4·5
Pharyngeal paresis	4	1·1
Facial paresis	4	1·1
Paresis of eye muscles	4	1·1
Paresis of limbs	3	0·8
Diaphragmatic paresis	2	0·6

Enteric Fever Group.

In hospital at commencement of year	—
Admitted during the year	26
Incorrectly diagnosed	3
Discharged	20
Died (Typhoid Fever)	1
Remaining in hospital at end of year	2
Average day of disease on admission	10th
Average stay in hospital	41·3 days
Average age of patients	22 years

The type of disease in the cases diagnosed as enteric fever was :—

Typhoid	6 cases
Paratyphoid B	14 ,,
Paratyphoid C	1 case

Erysipelas.

Amongst the 44 cases admitted 1 death occurred, which was due to senile myocarditis.

There were 19 cases notified as erysipelas in which the original diagnosis had to be amended. The following is a list of the conditions in which an alteration of the diagnosis was made :—

Cellulitis	6
Herpes zoster	3
Other skin conditions	9
Acute bacterial endocarditis	1

Measles.

113 cases of measles were admitted and 90 were discharged. One death occurred, giving a mortality percentage of 1·1. 13 cases were complicated by broncho-pneumonia and the fatal case was due to this cause.

Whooping Cough.

169 cases of whooping cough were admitted as against 97 in the previous year. There were 140 discharges and 14 deaths, giving a mortality percentage of 9·1, as against 11·1 per cent. in 1945.

The cause of death in the fatal cases was as follows :—

Broncho-pneumonia	5
Convulsions	2
*Prematurity	2
Gastro enteritis	1
Convulsions and broncho-pneumonia	1
Whooping Cough (only)	3

* The 2 deaths from whooping cough and prematurity occurred in twins who were between three and four weeks premature. At the time of confinement an older child in the house had whooping cough. One of the twins developed a cough two days, and the other four days, after birth. They were admitted to hospital 22 days after birth with definite whooping cough. One infant died 9 days, and the other 11 days, after admission.

Cerebro-Spinal Fever.

14 cases of meningococcal meningitis were treated during the year. 11 cases recovered and 3 died. All deaths took place within 48 hours of admission. The fatality percentage was 21·4.

	Total Cases	Male	Female	Died	Recovered	Case Mortality per cent	
						Total	Excluding Deaths in 48 hours
Under 1 year	4	4	—	2	2	50·0	—
1 to 5 years	1	—	1	—	1	—	—
5 ,, 10 ,, ...	3	3	—	1	2	33·3	—
10 ,, 20 ,, ...	4	4	—	—	4	—	—
0 and over	2	—	2	—	2	—	—
	14	11	3	3	11	21·4	—

Average day of disease on admission to hospital :—

Recoveries—Fourth.
Deaths—Third.

Table showing Numbers of Various Diseases Treated.

	Remaining in hospital, 1st January, 1946.	Admitted	Discharges and deaths	Remaining in hospital, 31st December, 1946
Scarlatina	21	449	448	22
Diphtheria and Diphtheria Carrier	62	400	431	31
Enteric Fever Group	—	23	21	2
Erysipelas	4	44	47	1
Puerperal Fever and Pyrexia ..	11	180	184	7
Measles	1	113	91	23
Whooping Cough	9	160	154	15
Other Diseases	25	735	744	16
Total	133	2,104	2,120	117

Post-Mortem Examinations.

During the year 20 post-mortem examinations were performed.

Aural Report.

The total number of cases of otitis media treated in the hospital during 1946 was 44 ; many of these were suffering from this condition on admission.

The following table shows the distribution of the cases of otitis media :—

	Total	Unilateral	Bilateral
carlet Fever	13	10	3
iphtheria	12	7	5
easles	3	2	1
hooping Cough, Chickenpox, and Miscellaneous	16	10	6
	44	29	15

No mastoidectomies were performed.

Puerperal Unit.

At the beginning of the year 11 patients were still under treatment in the puerperal unit. 180 patients were admitted for treatment of abnormal conditions arising in the puerperium or in association with abortion. 180 patients were discharged and 4 deaths occurred. The mortality percentage was 2·2 as against 0·75 per cent. during the previous year.

Of the 184 patients discharged or died the incidence of the various types of disease is shown in the following table :—

Puerperal sepsis	54
Puerperal pyrexia	26
Septic abortion	47
Incomplete abortion	34
Simple abortion	10
Threatened abortion	3
Inevitable abortion	6
Secondary anaemia	1
Pelvic cellulitis	1
Ectopic pregnancy	1
Metrorrhagia	1

In the 54 cases of Puerperal Sepsis the following complications were present :—

Phlegmasia alba dolens	7
Pulmonary embolism	2
Pelvic abscess	2
Pelvic cellulitis	2
Mastitis	3
Scarlet fever	2
Perinephritic abscess	1
Influenza	1
Bronchitis	1
Abscess on buttock	1
Venereal warts	1
Extensive perineal lacerations	2
Secondary anaemia	1
Syphilis	1

3 patients required a general anaesthetic for manual removal of retained placental tissue.

Puerperal Pyrexia.

The following table shows the cause of the pyrexia in the 26 cases of Puerperal Pyrexia admitted :—

Mastitis	15
Secondary Anaemia	3
Pleurisy	2
Broncho-pneumonia	1
Pulmonary Tuberculosis	1
Influenza	1
Miliary Tuberculosis	1
Gonorrhoea	1
Syphilis	1

Incision and drainage for breast abscesses was performed in 6 cases.

Septic Abortion.

In the 47 cases suffering from Septic Abortion, the following complications occurred :—

Pelvic Abscess	7
Generalised peritonitis	2
Pelvic peritonitis	2
Septicaemia	2
Pulmonary Embolism	1
Nephritis	1
Salpingitis	1
Phlegmasia Alba Dolens	1
Bronchitis	1
Asthma	1
Scabies	1
Influenza	1
Bilateral Keratitis	1
Pelvic cellulitis	1

19 patients had a general anaesthetic and digital removal of retained products of conception. 1 patient had posterior colpotomy (under general anaesthetic) for pelvic abscess.

Incomplete Abortion.

Of the 34 patients suffering from this condition, 24 had digital removal performed for retained products, 15 requiring a general anaesthetic.

Penicillin.

27 patients suffering from puerperal infection and 12 patients with abortal infections had Penicillin therapy, with good effect.

Laboratory Report.

Microscopical Examination of Cultures for C. Diphtheriae.

Source of Swab	Loeffler Culture Media		Tellurite Culture Media	
	Examined	Positive	Examined	Positive
Throat	6,052	712	656	241
Nose	5,959	212	565	171
Ears	68	4	7	3
Miscellaneous	2	—	—	—
	12,081	928	1,228	415

A list is appended of the various specimens examined in the laboratory :—

Faeces	1,219
Urine—	
Microscopical examination	82
Cultural examination	456
Chemical examination	82
Cerebro-spinal fluid—	
Microscopical examinations	79
Cultural examinations	95
Chemical examinations	68
Pus—	
Microscopical examination	24
Cultural examination	24
Sputum	28
Cervical swabs	8
Vaginal swabs	200
Blood cultures	85
Blood counts	179
Agglutinations	78
Direct smears	113
Throat swabs (for haemolytic streptococci)	375
Effusions	4
Miscellaneous	391
Total	3,590
Cultures examined	14,652
Specimens examined	3,590
Total	18,242

Immunisation of Nursing Staff.

82 members of the nursing staff were Schick tested. 17 of these were found to be positive and 12 were immunised against diphtheria. The remaining 5 left before immunisation was completed.

76 members of the nursing staff were Dick tested. 12 were positive and 8 were immunised against scarlet fever. The remaining 4 left the hospital before being immunised.

One nurse who was Schick test negative developed a mild " diphtheritic " infection of the throat.

9 nurses developed other infectious diseases, viz. : 1 measles, 8 enteritis.

WITHINGTON HOSPITAL.

By Dr. J. M. Greenwood, Medical Superintendent.

Staff.

(a) *Visiting Consultants*—

A. Hillyard Holmes, M.D., F.R.C.P.	Senior Physician
R. Ellis, M.D., F.R.C.P.	Physician
M. L. Thomson, M.A., M.D., M.R.C.P.	Physician
H. T. Simmons, M.D., CH.M., F.R.C.S.	Surgeon
H. T. Cox, M.A., M.D., F.R.C.S.	Surgeon
E. A. Gerrard, M.D., M.R.C.O.G.	Senior gynaecologist and obstetrician
R. Newton, M.D., M.R.C.O.G.	Gynaecologist and obstetrician
N. A. J. Young, M.B., CH.B., F.R.C.S.	Ear, nose, and throat surgeon
E. S. Brentnall, M.B., CH.B., F.R.C.S.	Orthopaedic surgeon
Judith E. M. Savatard, M.B., B.S.	Dermatologist
F. Janus, M.D.	Ophthalmologist
H. M. Morris, M.D.	Radiologist
A. A. Dunlevy, M.B., B.CH., B.A.O.	Radiologist
C. E. Sykes, M.B., CH.B., D.A.	Anaesthetist
Rose E. Williams, M.R.C.S., L.R.C.P., D.A.	Anaesthetist
H. J. A. Simmons, M.B., CH.B., D.A.	Anaesthetist
Douglas Wain, O.B.E., L.D.S.	Dentist

(b) *Full time.*

J. M. Greenwood, M.D., D.P.H.	Medical Superintendent
J. Carson, M.D., D.P.H., D.C.H.	Deputy Medical Superintendent
N. F. Kirkman, M.D., F.R.C.S.	Resident Surgical Officer
T. H. Lawton, M.B., CH.B.	Resident Obstetrical Officer
H. E. Bach, M.D. (Vienna)	Resident Assistant Surgical Officer
H. B. Slater, M.B., CH.B.	Resident Assistant Medical Officer (Tuberculosis Wards)
Catherine M. E. Jones, M.B., CH.B.	Resident Assistant Medical Officer
Margaret Bailey, M.B., CH.B.	Resident Assistant Medical Officer
Alice R. E. Widdows, M.B., CH.B.	Resident Assistant Medical Officer
R. L. Armistead, M.B., CH.B.	Resident Assistant Medical Officer
W. M. Whittaker, M.B., CH.B.	Resident Assistant Medical Officer
P. B. Lacey, M.B., CH.B.	Resident Assistant Medical Officer
Frances M. Fountain, M.B., CH.B.	Resident Assistant Medical Officer
Kathleen V. Lodge, M.B., CH.B.	Resident Assistant Medical Officer
Annie Cross, M.B., CH.B.	Resident Assistant Medical Officer
R. A. Martin, M.B., CH.B.	Surgical Resistrar (Supernumerary)
Jessie Rhodes, S.R.N.	Matron
E. F. Barber	Secretary-Steward and Master, Withington Institution.

General.

The work of the hospital has been considerably restricted by shortage of nursing staff. Patients have had to be refused admission on this account and this has affected particularly those who are old or suffering from chronic diseases. Maternity beds have been staffed by a depleted number of nurses dealing with a greater number of patients and this has necessitated the early discharge of patients from hospital.

Out-patient work has been extended and this has afforded some relief for the care of the sick, but no specific provision for buildings or staff has been made. The out-patients' attendances show a demand for this service and adequate provision is urgently required.

Extensions to the pathological laboratory were almost completed by the end of the year and this building will improve the working conditions of the department and be sufficiently large to allow for an increase of work.

The conversion of the remaining section of the old administrative block was finished during the year providing additional bedrooms and sitting rooms for nursing staff. This completed the conversion of this old building into a modern nurses' home with the exception of a small unit in the centre comprising offices and a linen store which it is hoped can be moved in the near future.

Improvements to the sanitary annexes of two ward pavilions were also completed, and various departments were painted during the year.

Delay in obtaining approval for other items of work has deferred the provision of additional privacy for patients on the maternity wards and of the extra facilities necessary for nursing the premature baby.

Increasing difficulty was found in staffing the tuberculosis wards and in view of this fact and other related factors it was decided that patients suffering from pulmonary tuberculosis should not be nursed in this hospital except those cases arising as an emergency in the City. Patients suffering from this condition will be nursed at Baguley Sanatorium, but nursing staff from this hospital are to be sent to Baguley for three months during the three years period of training. The transfer of patients is to take place early in 1947.

Plans for augmenting the specialist staff were approved by the Public Health Committee and steps were taken towards the end of the year to make additional appointments. This will result in a larger degree of supervision of both in-patients and out-patients by specialists.

General Figures.

These are given elsewhere and show details of stay of patients in the hospital. There was a total of 9,105 admissions to hospital of whom 284 were military.

Medical Department.

This section of the hospital suffered most severely from lack of nursing staff as on the whole preference must be given to the surgical emergency rather than the medical patient who can be nursed at home. Various small items of equipment were bought during the year and the medical wards which remained open were extremely active with a very rapid turnover of patients.

Surgical Department.

The number of operations performed during the year showed an increase over the previous year and totalled 3,401, of which 2,727 were of a major character. An analysis of operations is shown in the following table :—

	1946	1945
General	1,679	1,474
Orthopaedic	320	528
Gynaecological	788	682
Ear, Nose and Throat	152	82
Midwifery	47	57
Accidents	415	304
Total	3,401	3,127

Accident Department.

The accident and admissions department of the hospital were combined during the war in order to conserve staff, but towards the end of the year accident patients were separated into those who attended for the first time and who were seen in the admission unit and those who attended after the first time who were treated in a separate department of the hospital devoted to out-patients. There were 4,991 new patients seen in the accident section of the hospital and these patients attended on 11,258 occasions. Of the number of patients seen, 406 required admission to the hospital and 415 required operations which were performed in the department.

Obstetrical Department.

This section of the hospital has caused more concern than any other unit on account of the shortage of staff and the inability to control admissions. Bad housing conditions and other domestic difficulties make it necessary for some women to have their confinement in hospital although there is no medical reason for this. There was a considerable increase in the number of patients who were dealt with in the unit, but with a reduction in nursing staff this could only mean the early discharge of patients from the wards and towards the end of the year patients were being discharged on the seventh day after confinement. Patients admitted to hospital :—

(1) For ante-natal treatment—	
(*a*) From the clinic	932
(*b*) Emergencies	65
Total	997
(2) For delivery—	
(*a*) From the clinic	2,321
(*b*) Emergencies..	138
(*c*) Immediately after delivery	39
Total	2,498

Patients who attended the clinics :—

(1) Ante-natal—

Sessions—254 : Attendances—12,010.

(2) Post-natal—

Sessions— 50 : Attendances—1,317.

Mothers.

Medical aid sought during delivery on 1,053 occasions.

The following procedures were carried out :—

Repair of the perineum	517
Instrumental delivery	155
Surgical induction of labour	150
Breech delivery	72
Caesarean section	54
Twin delivery	39
External version	60
Blood transfusion	38
Manual removal of placenta	18
Internal version	5

There were 8 maternal deaths, the maternal mortality rate being 3·2 per 1,000 births. Of these deaths 3 were from causes not associated with the pregnancy.

There were 43 notified cases of Puerperal Pyrexia.

Babies.

The total number of babies born was (including 39 twin deliveries)		2,498
Premature babies born alive		230
Stillbirths—		
(*a*) Full time	28	
(*b*) Premature	58	
Total		86

Stillbirths rate 35 per 1,000 births.

Died under 10 days—	
(1) In premature babies	45
(2) Full term babies	60
Died over 10 days	32

Neonatal death rate 44 per 1,000 births.

Blood transfusions given to babies	5 cases
Discharged from hospital	
(*a*) Wholly breast fed	2,053
(*b*) Partially breast fed	124
(*c*) Artificially fed	98
Live babies discharged	2,275
Percentage—totally breast fed	90

Physiotherapy Department.

The staffing of this department has varied considerably during the year, being reduced at times to 50 per cent. of the establishment. It will be noticed that the number of in-patients treated has fallen considerably, but the number of out-patients treated has shown a rise. There were 1,972 new out-patients who attended for treatment and 494 new in-patients. Ward drill was given to groups of patients and the number of classes was 316, comprising a total of 4,156 patients.

The following table shows the work done in the department :—

	Attendances			Treatments		
	In-Patients	Out-Patients	Total	In-Patients	Out-Patients	Total
1946 ..	6,667	27,406	33,073	9,197	38,305	47,502
1945 ..	12,187	24,806	36,993	20,360	31,406	51,766

X-*Ray Department.*

This building was completely modernised during the year and is now a first class unit. A heavy mobile X-ray plant is being used in one of the rooms and it is proposed during the coming year to transfer this to the out-patient unit and replace it with a fixed plant of greater capacity. The total number of examinations was slightly less than the previous year and comprised 4,616 examinations of out-patients and 3,789 in-patients.

The table shows an analysis of the examinations done :—

Barium meals	621
Barium enemas	129
Chests	2,132
Excretory Pyelograms	187
Cholecystograms	683
Bones and joints	4,553
Miscellaneous	100
Total	8,405

Consultation Clinic.

This department was very active, and appreciated by medical practitioners in the neighbourhood as there is a great demand for increased provision of this type of service. Towards the end of the year two ward units near the entrance to the hospital were taken over for out-patient work and it is hoped in the near future that some alterations will be possible to make this department more suitable for its purpose. A total of 2,618 patients were seen and these patients attended clinics as shown below :—

General medicine	497
General surgery	1,058
Gynaecology	595
Orthopaedic surgery	468

For the last few months of the year clerical staff was made available for the department and this rendered the work of the professional staff easier and provided greater efficiency in dealing with patients.

Almoners' Department.

The established number of almoners was four but throughout the year three almoners only were employed.

Accommodation is inadequate and, with additional staff which we are hoping to recruit in the coming year, the position will be made even more difficult.

Training of students was continued and the activities of the department embraced care of patients in many directions such as provision of facilities for convalescent treatment, provision of surgical appliances, contact with employers in regard to more suitable working conditions, contact with other societies and home visits, arrangements for transport, and help to mothers with illegitimate children.

There are many other activities such as advising the public in regard to a completion of forms for nourishment, contact with probation officers, etc.

The almoners saw and recorded 28,764 attendances of out-patients. The number of women who were given help in regard to illegitimate children was 313.

The receipts amounted to £208 10s. 11d. over the previous year and are classified below :—

	£	s.	d.
Grants claimed from hospital funds	1,112	10	6
Out-patients' donations	519	2	4
Surgical appliances	215	12	6
Motor accidents and others	55	2	2
	£1,902	7	6

PARK HOUSE, CRUMPSALL.

By H. Ellis, Master.

STAFF.

Full time—

W. A. Ramsey, T.D., M.A., M.D.	Medical Officer
J. W. Burns, M.B., B.CH., B.A.O.	Resident Assistant Medical Officer (Mental Wards)
H. Ellis	Master
Miss S. Beardshaw, S.R.N., S.C.M.	Matron

The shortage of nursing staff, especially in the female mental and chronic sick wards, has been very acute during the year, resulting in admission into such wards having to be limited. The laundry has also been very understaffed, making it difficult to cope with the amount of washing required to be done.

During the year 566 patients (306 males and 260 females) were admitted into the mental wards as compared with 730 for the previous year.

Recreational and entertainment facilities in the form of dancing, pictures, outings, etc., for the patients have been well maintained and are very much appreciated. The occupational centre continues to do good work. It is very well attended, resulting in the turning out of some very useful articles.

The nursing of sick inmates who require treatment is still being carried out in the Institution and a number of chronic sick patients from Crumpsall Hospital is also being nursed.

Aged and infirm persons admitted numbered 330, a decrease of 72 compared with last year.

The inmates and patients have received a varied dietary, which is well cooked. The dining rooms are regularly visited during meal times and the inmates and patients appreciate the efforts that are being made to make their food more appetising.

There is still a number of evacuees in the Institution from Great Yarmouth, London, and Salford.

The health of the inmates and patients has been good. There has been no outbreak of infectious disease.

Mental Wards.

	Male	Female	Total
Remaining on 31st December, 1945	221	277	498
Admitted	306	260	566
Discharged (recovered or improved)	109	156	265
Discharged otherwise	117	106	223
Deaths	93	58	151
Remaining on 31st December, 1946	208	217	425
Average daily number under treatment	216	228	444

Discharges.

	Male	Female	Total
Within 3 days	29	10	39
Under 17 days	167	116	283
Under 4 weeks	15	33	48
Under 3 months	9	54	63
Over 3 months	6	49	55
Total	226	262	488

Deaths.

	Male	Female	Total
Within 3 days	7	—	7
Under 17 days	32	8	40
Under 4 weeks	16	6	22
Under 3 months	20	10	30
Over 3 months	18	34	52
Total	93	58	151

WITHINGTON INSTITUTION.

By Ernest F. Barber, Master.

STAFF.

Full time—

J. M. Greenwood, M.D., D.P.H.	Medical Officer
Ernest F. Barber, F.H.A.	Master
Catherine Robertson, S.R.N.	Matron

The premises at the end of the year were utilised as follows :—

	Beds	Patients	
FOR CHRONIC SICK.			
Females—			
3 Pavilions (8 wards occupied)	340	329	
1 ward partly occupied	43	13	(sleeping only)
2 Infirm wards	68	67	
Males—			
2 Pavilions (5 wards occupied)	241	226	
Extra beds	3		
1 ward closed	42	—	
	737	635	
FOR AMBULANT PATIENTS.			
1 Pavilion for males	106	75	
Totals	843	710	

Not in use and due for reorganisation under the Five-Year Plan.

2 Pavilions . . . . 202 beds

The conversion of "A" Home for staff accommodation is almost completed and it is hoped that it will be in use at an early date.

The staff home is used as staff residential quarters, kitchens, dining rooms, etc.

Two other pavilions are closed and are included in the Five-Year Plan for necessary alterations to provide additional accommodation for chronic sick cases and for the accommodation of necessary additional staff.

The year has been a busy one, the average daily population being 698; the highest number was 728 and the lowest 657. There were 547 admissions.

Waiting List.

It has still been necessary to maintain a waiting list throughout the whole period under review, and in many cases long periods elapsed before admission could be arranged. Until a larger nursing staff is available and further alterations are carried out there does not appear to be any possibility of dispensing with the waiting list.

Statistical Summary.

	Men	Women	Total
On list, 1st January, 1946	11	96	107
Additions to list	299	392	691
Totals	310	488	798
Admitted to Institution	167	258	425
Removed from list (deaths, admitted to other places, etc.)	137	201	338
Totals	304	459	763
Remaining on list 31st December, 1946	6	29	35
Highest numbers (13th February, 1946)	49	87	136
Lowest numbers (13th September, 1946)	4	—	4

Evacuees.

One evacuee was admitted and 4 died, leaving at the end of the year 1 male and 5 females.

Outings.

During the summer months the Committee authorised outings for the patients and inmates and four outings were arranged. 220 patients participated, Southport, Lytham (twice), and Cleveleys being visited. These excursions were much enjoyed and greatly appreciated by the patients and inmates, who hope that these outings may become an annual event.

Gifts.

Many gifts were received and it has been particularly pleasing that quite large gifts of foodstuffs have come from the following countries:—Australia, Africa, New Zealand, South America, and the United States of America. These gifts have been most acceptable and acknowledgments and thanks were sent to all the donors.

Deaths :—

The following are the age groups of the 264 persons dying in the Institution :—

Under 60 years old	19
Between the ages of 60 and 70 years	30
Between the ages of 70 and 80 years	117
Between the ages of 80 and 90 years	94
Over 90 years old	4

SWINTON HOME.

By W. T. Williams, Secretary-Steward.

STAFF.

(a) *Full time*—

W. T. Williams, F.H.A.	Secretary-Steward.
Elsie Williams, R.M.P.A.	Matron.

(b) *Part time*—

J. H. Moore, M.B., CH.B.	Visiting Medical Officer

With deep regret this report records the death of the late Dr. J. H. Moore, the visiting medical officer, who lost his life at sea about 17th September, 1946, when the yacht he was sailing foundered in a storm. His duties here, since his decease, have been carried out by Dr. R. B. H. Faichney.

This Home for certified mental defective children has 130 beds which are kept full. The average number of beds occupied was 110, this extremely low figure being due to a shortage of nursing staff.

The general behaviour and conduct of the patients have been excellent there being no serious misdemeanour of any kind.

All patients who are teachable receive training in the school attached to the Home. The school is adequately staffed with trained personnel and is organised into four mental age groups. Instructions are given in social behaviour, physical training, handicraft, etc. Every child is given an individual intelligence test by the Binet-Simon method and placed in one of the four previously mentioned groups.

The recreation of the children is well catered for and they were taken individually and in groups to the local cinemas and theatres on many occasions, especially at holiday times. Last summer they were taken for a day to the sea-side, whilst at Christmas large parties were taken by bus to attend pantomimes on eight occasions. Short holidays with their parents are greatly encouraged and small groups of children are taken out frequently to tea and parties at the homes of the nursing staff. Parties of entertainers have visited the Home and given concerts.

Except for an epidemic of measles during the winter months, which affected 45 patients (no serious complications or deaths occurred), the health of the children has been most satisfactory. All acute cases of illness have been promptly recognised and treated.

ROSE HILL CONVALESCENT HOME, NORTHENDEN.

By A. Hartley, Secretary-Steward.

STAFF.

(*a*) *Full time*—

A. Hartley .. .. Secretary-Steward.
Agnes M. Matthews, S.R.N., S.C.M. .. .. Matron.

(*b*) *Part time*—

P. Moran, M.D. .. .. Visiting Medical Officer.

206 patients were admitted and 194 discharged. Included in the admissions were 33 mothers and new born babies. 26 of the babies were subsequently adopted.

The average number of beds occupied was 43, a slight increase over the previous year, but still a low figure, mainly due to the shortage of staff and the occurrence of infections. There was rather a high rate of sickness among the resident and non-resident staff which resulted in a loss to the Home of 432 working days and, consequently, it has made the work of the nursing staff rather heavy.

The following cases of sickness have been nursed actually in the Home :—

Dysentery (negative)	15	Asthma	1
Ophthalmic cases	10	Chickenpox	3
Tonsillitis	10	Eczema	2
Influenza and Hyperpyrexia	10	Synovitis	1
Bronchitis	8	Cellulitis and abscesses	10
Respiratory catarrh	8	Neuritis	1
Otorrhoea	8	Measles	1
Gastro enteritis and Gastritis	11	Scarlet Fever	1
Dermatitis	6	Petit Mal	1
Impetigo	4	Tachycardia after post partum haemorrhage	1

Bacteriological specimens sent to the Public Health Laboratory for examination numbered 144.

Negative results	122	
Positive Sonne dysentery	17	Transferred to hospital for treatment.
Positive Flexner dysentery	3	
Positive Morgani dysentery	2	

The following cases were also transferred to hospital for treatment :—

Impetigo and blepharitis	1	Respiratory catarrh	3
Otitis media	2	Tonsillitis	2
Pyrexia	2	Chickenpox	5
Gastro enteritis	16	Scarlet fever	1
		Fits	1

A new refrigerator and sterilizing equipment has been installed which will now enable new-born babies who are not breast fed to be received. Owing to the lack of this equipment in the past such babies were refused admission.

CONVALESCENT HOMES.

Patients in convalescent homes on 1st January		122
Patients admitted 1st January to 31st December—		
Adults	95	
Children	560	
		655
Patients discharged 1st January to 31st December—		
Adults	98	
Children	556	
		654
Remaining in convalescent homes on 31st December—		
Adults	—	
Children	123	
		123

Summary of Admissions.

Name of Home	Number of Patients	
	Adults	Children
Adults—		
Royal Alexandra Hospital, Rhyl	1	—
Blackburn and District Convalescent Home, St. Annes	4	—
Devonshire Royal Hospital, Buxton	1	—
West Hill Convalescent Home, Southport	89	—
Children—		
The Dr. Garrett Memorial Home, Conway	—	357
The Children's Convalescent Home, West Kirby	—	35
Royal Alexandra Convalescent Home, Rhyl	—	38
St. Joseph's Convalescent Home, Freshfield	—	130
	95	560
Total	655	

Summary of Discharges.

Name of Home	To home improved	To home fit	To Booth Hall Hospital	To Abergele Sanatorium	On Demand	Total
Adults—						
The West Hill Convalescent Home, Southport	3	87	—	—	2	92
The Devonshire Royal Hospital, Buxton	1	—	—	—	—	1
The Royal Alexandra Hospital, Rhyl	—	1	—	—	—	1
Blackburn and District Convalescent Home, St. Annes	—	4	—	—	—	4
Children—						
Dr. Garrett Memorial Home, Conway	—	345	7	1	15	368
Children's Convalescent Home, West Kirby	—	28	—	—	6	34
Royal Alexandra Hospital, Rhyl	—	26	—	—	—	26
St. Joseph's Convalescent Home, Freshfield	—	96	1	—	31	128
						654

Outfits of clothing.

£9 was spent on clothing for children proceeding to convalescent homes; no money was spent on clothing for adult patients. A large quantity of clothing has been given to patients by the Women's Voluntary Services, the Manchester and Salford Methodist Mission, the City League of Help, and the Catholic Needlework Guild.

Infections.

Dr. Garrett Memorial Home, Conway	Chickenpox ..	17 cases
St. Joseph's Convalescent Home, Freshfield ..	Chickenpox ..	2 cases
	Scarlet fever ..	1 case
Children's Convalescent Home, West Kirby ..	Scarlet fever ..	1 case

In an endeavour to reduce the cases of infection at the Dr. Garrett Memorial Home, Conway, all the children recommended for admission to Conway have a "freedom from infection" examination on the day of their transfer, in addition to the routine medical examination which takes place a few days before the day of admission.

There is one epileptic patient, chargeable to the Manchester Corporation, at an establishment not controlled by the Corporation. She is at the St. Elizabeth's Home for Epileptics, Much Hadham, Hertfordshire, and is allowed to remain because she has been there since she was 16 years old and looks upon St. Elizabeth's as her home. Her age is now 32.

Dr. GARRETT MEMORIAL HOME.

By H. Fisher, Secretary-Steward.

Staff.

Full time—

H. Fisher	Secretary-Steward.
Florence E. Ray, S.R.N., S.C.M.	Matron.

On 1st January, 74 children were in residence. The total number of admissions during the year was 364, a decrease of 17 as compared with the previous year. Discharges numbered 380, a decrease of 39 as compared with 1945. The number remaining on 31st December was 58, a decrease of 16 as compared with the same date in 1945.

The following is a summary of the diagnoses prior to admission :—

Debility	193
Anaemia	22
Diseases of respiratory system	56
Chorea	10
Rheumatic and Cardiac Disease	23
Otitis Media	7
Post Appendectomy	10
Miscellaneous	43
	364

Of the 380 children discharged, 346 were marked "fit," 17 "improved" and 17 required further hospital treatment. 366 gained weight and 14 remained stationary.

During residence approximately 350 children received nursing treatment for the following :—

Septic sores and boils	71	Blepharitis and conjunctivitis	6
Coryza and coughs	49	Scabies	6
Abrasions	39	Abdominal pains	5
Pyrexia and sore throat	37	Rheumatism and post-chorea	4
Eczema, Herpes and urticarial rash	31	Influenza	4
Diarrhoea and vomiting	20	Threadworms	3
Nocturnal enuresis	20	Ringworm	2
Chickenpox	20	Pneumonia	1
Tonsillitis and enlarged tonsils	15	Post-appendectomy	1
Otorrhoea and earache	19	Bronchiectasis	1
Billious attacks	8	Rubella	1
		Miscellaneous	20

Recruitment of staff was very poor during the first few months of the year. From June onwards the position was a little better, but not sufficient to enable full numbers of children to be maintained.

The Home was closed for admissions on three occasions, twice because of infection and once owing to shortage of staff. On thirteen occasions the number of admissions was reduced from 22 to 14 owing to the latter reason.

AMBULANCE AND DISINFECTING STATION, MONSALL HOSPITAL.

The Ambulance and Disinfecting Station adjoins Monsall Hospital for Infectious Diseases. This is an advantage, as upon the receipt of a call to remove an infectious case an ambulance is able to call at the hospital, collect a nurse, and continue on its journey for the patient within a very short time.

The Station consists of three sections, viz. :—

Ambulance Service ;

Bedding and General Disinfection Service ; and

Cleansing Clinic.

Ambulance Service.

Seven ambulances are utilised for this service and the conveyance, without any charge to user, of cases of infectious diseases to Monsall Hospital and Booth Hall Hospital is provided. Tuberculosis patients are also removed to Abergele, Baguley, and Delamere Sanatorium and Barrowmore Colony.

1,950 cases of infectious diseases, other than tuberculosis, were removed to Monsall Hospital, 1 case of smallpox was removed to Clayton Smallpox Hospital, and 174 patients were removed to home addresses or other institutions, making a total of 2,125 cases. The number of tuberculosis patients removed to sanatoria was 628, making a final total of 2,753 cases removed. This work involved 2,466 journeys and the total mileage for the year was 54,789 miles.

The service operates within the area of adjacent local authorities, who have entered into an agreement with Manchester for the treatment at Monsall Hospital of cases of infectious disease arising within their area, and for which a charge is made to the local authority concerned.

The service is operated by a series of rotating duty shifts which covers twenty-four hours, and analysis of journeys in relation to hours of admission and days of the week is as follows :—

(A) *Journeys in relation to hours of admission.*

Time	10-30 p.m. to 7-30 a.m.	7-30 a.m. to 12-0 noon	12-0 noon to 3-0 p.m.	3-0 p.m. to 6-0 p.m.	6-0 p.m. to 10-30 p.m.
Total	43	459	774	435	272

(B) *Journeys in relation to days of week.*

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Frequency	186	328	309	297	287	296	280

Bedding and General Disinfection Service.

Upon cases of infectious diseases being removed to hospital, a service is provided for the disinfection of clothing and bedding and 3 bedding vans are employed for the collection and return of these articles. Arrangements have been made with the Royal Air Force for the fumigation of blankets used in local R.A.F. stations and, in addition, the fumigation of second hand clothing for export is also undertaken. 30,626 articles were removed and disinfected and 91,000 R.A.F. blankets were fumigated, necessitating a mileage of 22,999 miles.

Cleansing Clinic.

The cleansing clinic deals with the following types of personal cleansing, viz. :—

(1) The treatment of Scabies in adults and children.

(2) The disinfestation of persons from clearance areas before removal to Corporation houses, and

(3) The cleansing of verminous persons, both voluntary and compulsory.

The staff consists of a sister and nurse for the treatment of scabies and 4 orderlies (2 male and 2 female).

The following table shows the number of treatments in their various classifications :—

	Scabies	Voluntary cleansing	Compulsory cleansing	Disin-festations	Total
January	1,168	207	46	32	1,453
February	1,145	197	26	33	1,401
March	899	87	5	43	1,034
April	781	140	4	44	969
May	907	195	12	87	1,201
June	565	107	6	44	722
July	507	124	32	20	683
August	547	118	—	38	703
September	624	121	53	73	871
October	701	105	46	133	985
November	495	71	41	103	710
December	310	51	15	67	443
Totals	8,649	1,523	286	717	11,175

MATERNITY AND CHILD WELFARE.

By Dr. Margaret H. Mackillop, Assistant Medical Officer of Health (Maternity and Child Welfare).

STAFF.

Medical—

Margaret H. Mackillop, M.B., CH.B.	Assistant Medical Officer of Health (Maternity and Child Welfare)
Helen G. M. Bennett, M.B., CH.B., D.P.H.	Centre Medical Officers (10)
Winifred Callender, M.B., B.CH., B.A.O., D.P.H. (resigned 16th August, 1946)	
Violet Conway, M.B., CH.B., D.R.C.O.G., D.P.H. (from 16th September, 1946)	
Annie M. Dawson, B.SC., M.B., CH.B., D.C.H.	
Florence M. Edmondson, M.B., CH.B.	
Greta Humble, M.B., CH.B.	
Rosaline Howat, M.B., CH.B. (from 23rd September, 1946)	
M. Irene H. Roberts, M.B., CH.B., D.P.H. (resigned 18th June, 1946)	
Vera Settle, B.SC., M.B., CH.B., D.C.H. (from 16th September to 17th December, 1946)	
Marion Stocks, B.SC., M.B., B.S., D.P.H.	
Beryl Wyke, M.B., CH.B., D.P.H.	

Nursing—

Gladys A. Treloar, S.R.N., S.C.M.	Non-medical Supervisor of Midwives.
Jean M. Calder, M.B.E., S.R.N., S.C.M. (resigned 25th May, 1946)	Superintendent of Health Visitors
Annie Phillips, S.R.N., S.C.M. (acting from 26th May, 1946)	

Assistant supervisors of midwives	2
Deputy superintendent of health visitors	1
Assistant superintendent of health visitors	2
Municipal midwives	61
Maternity nurses	6
Ophthalmic nurses	3
Special nurse for premature babies	1
Health visitors	91
Physiotherapists	10
	179

Lay—

Charles A. Hay, M.B.E.	Senior clerk.
Clerks	52
Others	74
Day nursery staff	373

The Midwifery Service.

During 1946 notice of intention to practice was given by 241 midwives, of whom 107 were employed in hospitals, 39 in nursing homes having no medical attendant, 13 were in independent domiciliary practice, and 65 were municipal midwives. 17 were employed by District Nursing Institutions.

Notified Births.

(1) Births at home		5,505
(a) Taken by midwives, including cases in which the midwife acted as maternity nurse (based on yearly return of cases made by midwives to Local Supervising Authority)	5,049	
(b) Taken by doctors (no midwife present)	5	
(c) Taken by St. Mary's Hospital district staff in Manchester area	451	
(2) Births in Institutions		9,718
(a) Hospitals	7,816	
(b) Maternity homes registered under Sections 187/192 of the Public Health Act, 1936..	1,902	
Total		15,223

Analysis of cases taken by Midwives who notified intention to practice.

Midwives notifying intention to practise	Midwives	Midwife only at the case		Midwife with doctor called in		Midwife as maternity nurse	**Total** cases
		Primiparae	Multiparae	Primiparae	Multiparae		
1. Births at home—							
(*a*) Municipal midwives ..	65	355	2,780	260	592	607	4,594
(*b*) Independent midwives living in Manchester area	7	6	40	7	22	22	97
(*c*) Independent midwives living outside Manchester area	6	12	55	3	3	14	87
(*d*) Midwives employed by District Nursing Institution	17	18	119	20	37	77	271
Total	95	391	2,994	290	654	720	5,049
2. Births in institutions— Midwives employed in registered nursing homes having no resident medical officer	39	171	375	114	72	768	1,500
Total	134	562	3,369	404	726	1,468	6,549

Supervision of Midwives.

Midwives were temporarily suspended from work on 171 occasions on account of contact with infection or of being themselves liable to be a source of infection.

Midwives are encouraged to report cases with raised temperature before they become notifiable under the Puerperal Pyrexia Regulations, 1939. A staff of trained nurses is available to take over such cases.

One midwife was summoned to appear before the Maternity and Child Welfare Sub-Committee to answer charges of breaches of the rules. The midwife was cautioned and warned that any further complaints would be reported to the Central Midwives Board.

Handywomen.

In addition to the prohibitions contained in the Midwives Acts of 1902 and 1926, Section 6 of the Midwives Act, 1936, enables the Minister of Health to make an Order for the area of a local supervising authority prohibiting unqualified persons from receiving any remuneration for attending as a nurse on a woman in childbirth or during the following 10 days. Such an Order has been made for Manchester and is entitled the "City of Manchester (Prohibition of Unqualified Persons) Order, 1939."

5 cases were reported where a relative only had attended the mother. They all stated they received no payment for their services.

Payments to independent midwives by local authority.

The City Council has approved a payment of 10/- to a midwife in independent practice who loses her fee for a case booked by her which is transferred to hospital prior to or during delivery on the recommendation of a medical officer at a welfare ante-natal clinic.

There were no claims during 1946.

Municipal Midwives.

Applications for municipal midwives numbered 6,055. 103 of these applications were withdrawn either for domestic reasons or due to removal from the district. 4,594 patients were delivered, 500 were transferred to hospital on account of unsatisfactory conditions before or during labour, and 135 pregnancies ended before the 28th week.

There was no change during the year in the fees charged for the services of a midwife, *viz* :—

First confinement, midwife only	40/-
Second and subsequent confinements, midwife only	35/-
First confinement, doctor engaged	35/-
Second and subsequent confinements, doctor engaged ..	30/-

Of the cases attended 106 were assessed to pay part fee and no charge was made in 54 instances.

Cases taken by municipal midwives during 1946 show an increase of 1,036 on the previous year.

Details of their work and visits are as follows :—

Deliveries between 9-0 a.m. and 9-0 p.m.	2,193
Deliveries between 9-0 p.m. and 9-0 a.m.	2,401
Total deliveries as midwife or maternity nurse	4,594
Cases of miscarriage nursed	70
Morning visits	70,294
Evening visits	16,196
Visits to patients discharged from municipal hospitals before the 14th day of the puerperium	10,145
Ante-natal visits to patients in their own homes ..	11,106
Ante-natal visits by patients to midwives' homes ..	17,732
Attendances by midwives at ante-natal clinics	1,891
Emergency calls	213

During 1946 midwives' pre-natal clinics were commenced at 9 welfare centres. This arrangement has been found to be satisfactory and it is hoped to extend this facility to other districts as circumstances permit.

Gas and Air Analgesia.

During the year, 14 municipal midwives were trained in the administration of gas and air analgesia and others were receiving instruction when the year closed.

At 31st December, 1946, 43 municipal midwives were qualified to administer gas and air analgesia and 40 had been supplied with Minnitt's apparatus.

352 patients availed themselves of the facilities.

Training of Midwives.

12 municipal midwives are approved as " teacher midwives " by the Central Midwives Board and during 1946 they trained 26 pupil midwives in district experience.

A series of six post graduate lectures commencing in the autumn of 1946 was given by specialists. The lectures were well attended and much appreciated by the midwives.

Medical Aid.

In accordance with the Rules of the Central Midwives Board with regard to calling in medical aid, record were received as follows:—

Source of request for medical aid	Requests sent to doctors		Patients referred to medical officers at ante-natal clinics
	Assistance in Labour and Puerperium	Assistance during pregnancy	
Municipal and independent midwives ..	2,000	327	2,025
Midwives of the District Nursing Institution	44	22	
Midwives in maternity homes having no resident medical officer	174	6	
Total	2,218	355	2,025

Puerperal Pyrexia.

245 cases of puerperal pyrexia were notified during the year. Every case is investigated at the patient's home address. The rate per 1,000 births was 16·6.

Causes of pyrexia were :—

Puerperal sepsis	83
Incomplete abortion	30
Simple abortion	17
Threatened abortion	10
Mastitis	29
Pyelitis	14
Gonococcal infection	4
Influenza	9
Retained products	6
Pneumonia	3
Tonsillitis	1
Phlegmasia Alba Dolens	4
Intestinal infection	2
Mild Uterine infection	6
Anaemia of pregnancy	1
Tuberculosis	4
Cardiac disease	1
Other causes	21
	245

Classification of notified cases of Puerperal Pyrexia.

Notified causes	Abortion	Deaths from abortion	Full term and premature labour	Deaths at term
Puerperal Sepsis—83	2—3 months .. 10 3—4 ,, .. 18 4—6 ,, .. 5 33	3 (1 of which was outside district)	Normal labour .. 38 Abnormal labour .. 12 50 Of these— Full-term .. 46 Premature .. 4 50	—
Puerperal Pyrexia—162	2—3 months .. 27 3—4 ,, .. 24 4—6 ,, .. 5 56	—	Normal labour .. 86 Abnormal labour 20 106 Of these— Full-term .. 89 Premature .. 17 106	3 (2 of these were due to Tuberculosis)

Analysis of cases of Puerperal Sepsis and Puerperal Pyrexia.

NUMBER OF CASES	MIDWIFE						DOCTOR, Midwife acting as Maternity Nurse			DOCTOR, No skilled nursing			INSTITUTION			HOSPITAL, External District		
	Midwife alone			Doctor present, called in according to C.M.B. Rules														
	Number of Cases	Attack Rate per 1,000 Cases taken	Number of Deaths	Number of Cases	Attack Rate per 1,000 Cases taken	Number of Deaths	Number of Cases	Attack Rate per 1,000 Cases taken	Number of Deaths	Number of Cases	Attack Rate per 1,000 Cases taken	Number of Deaths	Number of Cases	Attack Rate per 1,000 Cases taken	Number of Deaths	Number of Cases	Attack Rate per 1,000 cases taken	Number of Deaths
PUERPERAL SEPSIS (83 Cases)																		
Labour and premature labour 50	11	3·30	—	4	4·23	—	5	6·06	—	—	—	—	25 (including 1 resident outside Manchester)	2·57	2 (1 due to tuberculosis)	5	—	—
Abortions .. 33	—	—	—	—	—	—	—	—	—	33 (32 direct to Monsall Hospital, 1 via other Hosp'l)	—	3		—		—	—	—
PUERPERAL PYREXIA (162 Cases)																		
Labour and premature labour 106	25	7·38	1 (1 due to tuberculosis)	10	10·59	—	8	11·11	—	—	—	—	63 (including 4 resident outside Manchester)	6·58	—	—	—	—
Abortions .. 56	—	—	—	—	—	—	—	—	—	56 (54 direct to Monsall Hospital, 2 via other Hosp'ls)	—	—	—	—	—	—	—	—
Total cases ..245	36	—	—	14	—	—	13	—	—	89	—	—	88	—	—	5	—	—

Maternal Deaths.

23 deaths from childbirth occurred, the maternal mortality rate being 1·60. The figures for 1945 were 12 and 1·02 respectively.

Of 5 deaths from puerperal sepsis 1 was a full term pregnancy without pre-natal care or attendance at the confinement. This patient died in hospital shortly after admission.

Causes of death in childbirth were as follows :—

Puerperal sepsis—		
Septicaemia following septic abortion—no evidence of criminal interference	1	
Toxaemia and septicaemia due to mechanical attempt to procure abortion	1	
Peritonitis following septic abortion	1	
Abortion—manslaughter	1	
Not notified as puerperal sepsis but certified by the Coroner	1	
		5
Other causes—		
Obstetric shock	5	
Eclampsia	2	
Ruptured uterus	2	
Pre-eclamptic toxaemia	2	
Paralytic ileus following Caesarian Section ..	2	
Myocardial degeneration, twin labour, instrumental delivery	1	
Misadventure—external version, 8 months foetus ..	1	
Misadventure—undergoing operation for ectopic pregnancy	1	
Shock due to internal haemorrhage—spontaneous rupture of gravid uterus	1	
Myocardial failure, shock on collapse, toxaemia of pregnancy	1	
		18
Total		23

In addition there were 5 deaths where childbirth was not the primary cause of death.

Pemphigus Neonatorum.

61 cases of pemphigoid eruptions were reported.

25 of these were notified as pemphigus neonatorum and 36 were not notified as such. 2 deaths occurred.

51 cases occurred in children under two weeks, 6 children between two and three weeks, 3 children between three and four weeks, and 1 child over four weeks old.

The total number of cases is 13 more than the number occurring in 1945. 53 of these cases nursed by special nurses were of a mild type and the skin conditions were reported to be satisfactory within 5 weeks.

Stillbirths.

Notified stillbirths	Delivered by			Percentage of notified births
	Midwives, including cases where doctor called in under C.M.B. rules	Doctors, including cases where midwife acted as maternity nurse	Hospital and nursing home staff	
* 551	86	25	440	3·65

* Of these 17 were mothers whose home address was outside the City.

Stillbirths in the practice of Midwives.

Compared with the 76 stillbirths which occurred in 1945, the figure of 86 for 1946 shows an increase. 25 of the stillbirths occurred in primiparae. The percentage of stillbirths for all midwives' cases was 1·7.

Further particulars are shown below:—

	Primipara	Multipara	Total
Foetus fresh	14	27	41
Foetus macerated ..	11	34	45

Neonatal deaths in Midwives' practices.

There were 36 neonatal deaths, 11 of which occurred before a medical practitioner could attend and were referred to the Coroner.

The findings in these 11 cases were :—

Cerebral haemorrhage during parturition	2
Suffocation due to breech birth	1
Icterus Neonatorum	1
Premature births	2
Suffocation due to regurgitation of gastric contents accelerated by non-aeration of right lung	1
Asphyxia due to suffocation by overlaying	1
Atelectasis	2
Fractured bones of skull	1

The care of premature and weakly babies.

The Ministry of Health Circular 20/44 dated March 22nd, 1944, on the care of premature infants, makes recommendations on arrangements for the care of these infants. In addition to the recommendations which were implemented in 1944, arrangements were made for fitted cots with draught proof linings to be available at 3 municipal hospitals as and when required by doctors and midwives.

A special nurse for the care of premature babies was appointed in August, 1945.

The following table gives a summary of the work done:—

Total number attended	198
Number where attendance ceased—baby attained 7lbs. weight	159
Transferred to hospital	20
Died at home:—	
(a) whilst nurse still attending	5
(b) after nurse had ceased to attend ..	6

(3 of these deaths were due to congenital heart defects and 1 died through being overlaid).

47 infants were born	under 4 lbs. in weight	and	43 survived.
99 ,, ,, ,,	4 to 5 lbs.	,, ,,	89 ,,
52 ,, ,, ,,	5 to 6 lbs.	,, ,,	35 ,,

Average time nurse attended each case .. .. $6\frac{1}{2}$ weeks.

Infants breast fed	102	(37 of these required complementary feeds in addition).
Infants artificially fed	65	

Artificial Feeding.

412 notifications of recourse to artificial feeding were received, 68 from midwives and 344 from institutions. In 116 of the total cases it was stated that artificial feeding was supplementary and not a complete change over. Of the remainder the causes given were:—

Tuberculosis in mother	35
Malformed nipples	72
Social reasons	27
Baby being adopted	17
Mastitis	20
Mother returning to work	9
Poor health of mother	44
Baby not progressing	30
On the advice of the doctor	35
Death of mother	1
Twin pregnancy	6
	296

Maternity nurses, ophthalmic nurses, and nurse for the care of premature babies.

The visits paid by these nurses are summarised as follows :—

	No. of visits
Notified cases of puerperal pyrexia	603
Cases of raised temperature	1,780
Mammary abscess and mastitis	773
Phlegmasia alba dolens and phlebitis	77
Mothers whose condition was unsatisfactory during and after the lying-in period	123
Mothers with septic skin condition	31
Cases of abortion	7
Cases of infection in the house	12
Promotion and re-establishment of breast feeding ..	25
Mothers of infants suffering from pemphigus neonatorum	38
Premature and immature babies	2,136
Septic and unsatisfactory conditions of the umbilicus and other skin conditions	265
Pemphigus neonatorum and other skin infections ..	1,270
Spina bifida	97
Mastitis	51
Ophthalmia neonatorum	116
Other unsatisfactory conditions	32

Summary of investigations other than nursing visits made by the Supervisors of Midwives and Special Maternity Nurses:—

Investigation visits to notified cases of puerperal pyrexia . .	236
,, ,, *re* maternal deaths	35
,, ,, *re* cases of pemphigus neonatorum . .	9
Total	280

Visits for domiciliary nursing (including ophthalmic nursing)	13,774
Visits by Supervisors of Midwives	462
	14,516

Ophthalmia.

Three state registered nurses with special ophthalmic training and experience are employed. They visit and treat, under medical supervision, all cases of eye disease from birth to school age when those who still have eye defects are referred to the School Health Service. Cases are reported by midwives under the rules of the Central Midwives Board, medical practitioners, and hospitals, medical officers at welfare centres and health visitors. 734 cases were visited. Of these 282 were of eye disease in older children (*i.e.*, 3 weeks to 5 years), and 351 cases of ophthalmia neonatorum. The visits paid numbered 6,343.

Ophthalmia Neonatorum.

351 cases were reported by midwives for unsatisfactory eye conditions. 95 of these were infants who had been discharged from hospital before the 14th day. 101 were notified by medical practitioners (either privately or at the Royal Eye Hospital) as cases of ophthalmia neonatorum.

As a result of modern methods of treatment many cases have been nursed at home which would otherwise have required hospital treatment, and cases with positive reactions have cleared in 3 days. Swabs were taken from the conjunctivae when possible and examined bacteriologically for the presence of gonococcus. Of 23 swabs examined 9 gave a positive result.

Corneal defects.

No corneal defect occurred in any case of ophthalmia neonatorum during the year. One case was reported of corneal affection in an older child whose family had recently come to live in Manchester.

There was a satisfactory decrease in cases of blepharitis.

The following table gives the record of corneal conditions and blepharitis for the last 5 years :—

Corneal conditions and Blepharitis.

Year	Blepharitis	Corneal Opacity found as ulcer or nebula
1942. . . .	13	10
1943. . . .	13	7
1944. . . .	5	5
1945. . . .	11	5
1946. . . .	2	1

Ophthalmia Neonatorum and Conjunctivitis—History of Mother.

	Age of Mother						Parity									Labour			No. of mothers having had previous cases of Ophthalmia Neonatorum	History of yellow discharge	Legitimacy	
	Under 20	20	25	30	35 and over	Total	1	2	3	4	5	6	7	8	9	Normal	Abnormal	Attendant not present at birth			Legitimate	Illegitimate
Notified cases	7	18	31	31	14	101	33	25	22	14	2	2	0	2	1	97	3	1	1	—	94	5
Not notified (midwives' cases)—																						
(*a*) Own cases	4	28	78	80	66	256	49	90	53	34	13	9	3	3	2	251	5	—	5	2	250	6
(*b*) Hospital discharges under 14 days	6	10	38	21	20	95	46	31	7	4	5	1	—	1	—	95	—	—	1	—	94	1

Ophthalmia Neonatorum and Conjunctivitis.

	Interval in days between birth and onset											Attended by				Where treated				Total
	1	2	3	4	5	6	7	8	9	10	Total	Midwife	Doctor	Midwife and Doctor	Institution	Home	Out-patients at Royal Eye Hospital	In-patients at Royal Eye Hospital	Other Institutions	
Notified cases	—	8	4	6	8	6	11	13	8	37	101	60	—	—	41	60	4	32	5	101
Not notified (midwives' cases) ..	1	13	14	13	26	25	32	23	27	82	256	250	—	6	—	248	8	—	—	256
Hospital discharges under 14 days..	1	2	2	3	3	4	3	10	4	63	95	—	—	—	95	87	7	1	—	95

395 were treated by private practitioners. 52 received treatment at the Royal Eye Hospital and 5 in other institutions.

Progress of cases of Ophthalmia Neonatorum and Conjunctivitis in newly-born infants.

	Complete recovery	Death	Removed before recovery	Still under treatment
Notified Ophthalmia Neonatorum (101 cases)	96	1	1	3
Conjunctivitis (351 cases)	342	—	2	7

62 notified cases of Ophthalmia Neonatorum and 204 cases of Conjunctivitis recovered within one month.

Analysis of Eye Diseases in Children.

	Brought forward from 1945	New cases in 1946	Carried over to 1947
Conjunctivitis (simple)	—	195	13
Conjunctivitis (purulent)..	—	11	—
Lacrimal obstruction	6	58	3
Dacryocystitis	—	3	—
Blepharitis..	1	2	2
Corneal Ulcer	1	—	1
Corneal Nebula	4	1	5
Coloboma	2	1	3
Cataract (congenital)	5	2	7
Cataract (polar)	1	—	1
Glioma	3	—	3
Defective vision	—	3	3
Microphthalmus	1	—	1
Pterygium	—	—	—
Nystagmus	2	1	3
Anophthalmus	2	—	2
Hordeolum	—	3	—
Phlyctenula	—	—	—
Albino	1	2	2
Ptosis	1	—	1
Ruptured Globe	1	—	1
Buphthalmos	2	1	2
Photophobia	—	-	—
Trauma	1		1
	28	282	54

Sunshine Home for Blind Babies.

2 children were maintained by the Health Committee in the Sunshine Home, one suffering from right and left congenital microphthalmus and one who had both eyes removed on account of glioma.

Eye diseases in Children.

Reports on 12 children having corneal and/or congenital defects who were under supervision by the ophthalmic nurses were referred to the School Health Service, having attained school age.

Maternity Beds.

The arrangements made by the Health Committee comprise the following :—

(1) Maternity units at the two municipal general hospitals, Crumpsall and Withington, providing 125 and 100 beds respectively, a total of 225 beds.

(2) Maintenance of beds in voluntary institutions, viz. :—

St. Mary's Hospitals (for first and abnormal cases) ..	2
Denison House	2
North Manchester Maternity Home	2
Crossley Hospital	2

(3) Municipal Maternity Homes at Prestbury Hall and Collar House, Prestbury, Cheshire.

The beds provided consist of 20 at Prestbury Hall and 35 at Collar House.

The following admissions were arranged :—

(1) Maternity wards of municipal hospitals		6,592
(2) Reserved beds in voluntary institutions		69
(3) Prestbury Hall	483	
Collar House	825	
		1,308*

* Including 11 from outside the City Boundary.

The average stay at Prestbury Hall was 13·8 days and at Collar House 13 days.

Welfare Centres.

At the end of 1946 there were 23 municipal welfare centres and one voluntary centre in the Holy Name schoolroom for which the City supplies the medical officer. This centre is otherwise staffed by the Sisters of Charity of the Order of St. Vincent de Paul.

At the various centres there are 120 weekly medical consultations, comprising 70 infant, 6 sunlight, and 44 ante-natal sessions. There are 6 toddlers' sessions, at which an attempt is made to secure only the attendance of children between 2 and 5 years old.

At the end of the year there were on the centre registers:—

9,211 children under 1 year	Total 15,526.
3,035 children between 1 and 2 years	
3,280 children between 2 and 5 years	

163,129 attendances were made at these sessions:—

118,789 by children under 1 year.
27,026 by children between 1 and 2 years.
11,086 by children between 2 and 3 years.
4,890 by children between 3 and 4 years.
1,338 by children between 4 and 5 years.

Toddlers' Sessions.

Weekly examination sessions for children between 2 and 5 years of age are held at 6 centres and the parents are encouraged by health visitors to take their children for examination in cases where they are unable to obtain continued medical supervision.

Massage and Remedial Exercises.

Massage treatment is provided at 19 centres, where 44 sessions are held each week. At 8 centres a weekly class of remedial exercises is held for children from 2 to 5 years. The ailments treated are postural defects, rickety deformities, general or local poor muscular tone, and some of the milder birth injuries.

There were 18,113 attendances for massage and 3,627 for remedial exercises.

Artificial Sunlight.

Treatment by ultra-violet light is given at Chorlton-upon-Medlock, Cheetham Hill Road, Newton Heath, and Ardwick Centres.

The number of individuals treated was 1,066 and the treatments given numbered 21,735; 1,030 of these were children of whom 123 were under 1 year old. The adults numbered 36 and included expectant mothers suffering from the various discomforts of pregnancy and post-natal debility, bronchitis, asthma, and rheumatism. Children were treated for adenitis, boils, asthma, rickets, anaemia, and malnutrition. 359 children ceased to attend before treatment was completed.

All cases discharged were asked to attend for re-examination at a period of from 2—3 months after cessation of treatment, and 75 per cent. kept their appointments. 38 were recommended to have a further course of treatment.

Dental Clinics.

Sessions for dental treatment of nursing and expectant mothers and for children are held weekly at Rosamond Street West and Cheetham Centres. Dental treatment is given followed by three or six monthly invitations for further inspection and treatment.

Cookery Classes.

Practical instruction in cookery was continued at 6 welfare centres, where mothers were taught the value of food and the preparation of meals.

Make Do and Mend Classes.

3 " make do and mend " classes were provided during 1946 for instructive advice to the mothers in Collyhurst, Withington, and Northenden districts.

Voluntary Workers.

87 voluntary workers gave valuable assistance at the welfare centres during the year, making 6,983 attendances—an average of one worker per session.

The Schools for Mothers Holiday Home at " Oakleigh," Marple, which was opened in 1936 for mothers and babies proved popular, and during the summer months the Home was full.

Ante-natal Clinics.

Ante-natal clinics are provided at 17 centres where a total of 44 sessions are held weekly.

Four weekly sessions are held at Ardwick and Openshaw; thrice weekly at Collyhurst, West Gorton, Rosamond Street, Blackley, Newton Heath, Harpurhey, Withington, and Rusholme, and bi-weekly at Cheetham, Clayton, Hulme, Levenshulme, and Northenden. In December a new ante-natal session was opened at Abbey Hey to relieve the demand in the Gorton area. At Rosamond Street, Ardwick, and Hulme, these clinics are combined with V.D. treatment for mothers and children. Ancoats has one weekly session.

9,669 new mothers presented themselves and 47,979 attendances were made.

In addition to the ante-natal sessions provided at these welfare centres, there are ante-natal clinics at St. Mary's Hospitals and Crumpsall and Withington municipal hospitals.

Post-natal Clinics.

Every attempt was made to secure the attendance of mothers for post-natal examination at one of the 17 ante-natal clinics and 289 mothers presented themselves for examination at 4—6 weeks after confinement. Post-natal conditions were found to be satisfactory in 234 cases and in 55 cases where conditions were considered to be unsatisfactory, advice was given to the mothers concerned.

Ante- and Post-natal Exercises.

Exercises for mothers during the ante- and post-natal periods are held at four welfare centres. At Northenden, Withington, and Rusholme the exercises are given by a physiotherapist in the employ of the Department. At Levenshulme by arrangement with Ancoats Hospital, a member of the staff of the Physiotherapy Department has continued to conduct these classes.

The attendances were :—

Northenden	414	
Withington	779	
Rusholme	414	
Levenshulme	678	
		2,285

The purpose of this treatment is to improve the condition of mothers before and after confinement.

Ailing Children.

Hospital treatment.

20 beds for children under 1 year and 10 for children between 1 and 3 years are retained at the Duchess of York Hospital for Babies and 180 beds for children under 5 years are provided at Booth Hall Hospital.

Dental Inspection, 1946.

Mothers.

	Cheetham	Chorlton-upon-Medlock	Total
(1) Mothers who were inspected by the dentist ..	196	214	410
(2) Found to require treatment	196	214	410
(3) Treated	187	214	401
(4) Attendances made by mothers for treatment ..	432	392	824
(5) Half-days devoted to inspection and treatment	50	50	100
(6) Extractions	856	815	1,671
(7) Other operations	6	—	6

Dental Inspection, 1946.

Children.

	Cheetham	Chorlton-upon-Medlock	Total
(1) Children who were inspected by the dentist:—			
Routine age groups.. 1 year	—	2	2
2 years	27	26	53
3 ,, ...	68	94	162
4 ,, ...	166	249	415
5 ,, ...	184	318	502
Total	445	689	1,134
(2) Found to require treatment	445	689	1,134
(3) Treated	445	689	1,134
(4) Attendances made by children for treatment ..	445	689	1,134
(5) Half-days devoted to inspection and treatment	50	50	100
(6) Fillings—temporary teeth	1,604	2,342	3,946
(7) Extractions—temporary teeth	82	159	241

Ante-Natal Cases at centres and results of delivery, 1946.

Centre	On Register on 1st Jan., 1946	New cases	Trans-ferred from another Centre	Total	Still on Register Jan. 1st 1947	" Term " births	Still-births included in "term" births	Premature births	Still-births included in premature births	Mothers left district before confinc-ment	Trans-ferred to another Centre	Mothers not pregnant	Totals
Abbey Hey	—	7	5	15	13	2	—	—	—	—	—	—	
Ancoats	43	199	1	243	90	125	3	13	2	11	1	3	
Ardwick	139	610	3	752	193	439	10	70	8	29	5	15	
Blackley	162	643	1	806	260	462	5	50	15	25	2	7	
Chorlton-upon-Medlock	82	393	—	475	151	290	4	11	9	7	6	10	
Cheetham	149	608	4	761	248	409	10	43	—	44	3	14	
Clayton	82	377	1	460	126	271	2	18	4	29	—	16	
Collyhurst	179	814	6	999	268	621	3	70	19	19	7	14	
West Gorton	146	698	1	845	256	499	12	54	12	13	11	11	
Harpurhey	173	645	4	822	249	508	6	36	5	15	5	9	
Hulme	69	297	7	373	107	214	2	28	11	17	—	7	
Levenshulme	133	558	5	696	218	388	7	26	3	52	3	9	
Newton Heath	149	669	2	820	229	435	6	48	12	89	3	16	
Northenden	158	549	5	712	217	439	5	29	1	20	2	5	
Openshaw	267	1,022	3	1,289	368	818	5	66	8	11	7	19	
Rusholme	224	832	3	1,059	307	601	6	35	9	92	4	20	
Withington	154	696	1	851	265	550	5	7	7	26	1	2	
Totals	2,309	9,617	52	11,978	3,565	7,071	91	604	125	499	60	177	

In addition, one mother attending Ardwick Centre and one attending West Gorton Centre died undelivered.

Remedial Day Nurseries.

Two such nurseries are maintained by the Manchester Schools for Mothers at Openshaw and in the grounds of the University Settlement at Ancoats. The nurseries are maintained for children between 18 months and 5 years suffering from rickets, malnutrition, and debilitated conditions. Cases for these nurseries are recommended by the centre medical officers. The children are retained until they are well or reach the age of 5 years.

The Corporation retains 5 places at each of the nurseries.

Minor Ailments.

During the year 369 children under 5 years were referred from the welfare centres to school clinics for treatment for the eyes, ears, nose, skin, etc. 583 children were still undergoing treatment for ailments which had not been cured in 1945, thus the total number of children was 952.

The classification in ailments and attendance of these children is shown, also the number who finished treatment.

Where attendance ceased before treatment was completed, and where non-attendance was reported, the health visitors endeavoured to secure attendance or re-attendance as necessary.

Treatment of Minor Ailments.

Ailment	New cases referred	Still under treatment from 1945	Total	Reported not attending	Ceased attending but not finished treatment	Still under treatment	Finished treatment
Squint	97	245	342	5	10	272	59
Other eye affections	28	15	43	—	—	19	18
Otorrhoea	69	92	161	1	3	109	48
Other ear affections	16	8	24	—	4	11	9
Affections of nose	6	9	15	1	1	9	4
Impetigo	114	182	296	—	1	213	82
Other skin affections	24	24	48	—	—	27	21
Miscellaneous	15	8	23	—	—	8	15

Dried Milk and Vitaminised Foods.

The Health Committee continued to afford facilities in their Welfare Centres for the distribution of National Dried Milk, cod liver oil, orange juice, etc. Proprietary brands of dried milk were sold also to mothers attending the centres.

A quantity of these brands and National Dried Milk was supplied free by the Department on the recommendation of the centre medical officers at a total cost of £584.

Mothercraft Exhibition.

The Maternity and Child Welfare Mothercraft Exhibition comprises a set of model garments for the child 0—5 years, diets modelled in wax indicating the necessary amount of food and calorific and vitamin contents for children. There are also exhibts of home nursing for the sick child, toys, " safety first " in the home and garden, depicting the occurrence and prevention of accidents. The exhibition is frequently loaned to other local authorities. 832 patterns of model garments were sold at the welfare centres.

Children attending Welfare Centres, 1946.

Centre	On Register, January 1st, 1946			New attenders			Died	On Register, January 1st, 1947		
	0—1 years	1—2 years	2—5 years	0—1 years	1—2 years	2—5 years		0—1 years	1—2 years	2—5 years
Abbey Hey	307	121	170	421	24	46	2	370	106	163
Ancoats	138	77	60	160	16	41	9	130	68	80
Ardwick	338	200	242	527	62	94	15	484	168	206
Blackley	449	224	407	470	13	52	2	597	142	305
Chorlton-upon-Medlock	307	160	115	295	41	43	3	225	108	86
Cheetham	438	175	149	376	28	34	3	367	122	95
Clayton	254	115	108	272	17	22	1	284	90	108
Collyhurst	418	223	168	557	41	91	16	588	112	101
Chorlton-cum-Hardy	542	239	199	447	24	39	3	528	148	145
Didsbury	306	168	127	246	19	23	1	294	117	113
West Gorton	533	182	256	454	43	62	8	404	168	236
Harpurhey	527	146	151	434	29	45	4	493	117	125
Higher Blackley	165	88	80	167	11	25	—	214	53	60
Holy Name	41	20	50	48	4	4	—	52	30	44
Hulme	204	131	92	282	18	34	16	268	96	86
Levenshulme	790	253	202	637	33	66	7	675	181	258
Newton Heath	488	189	183	401	24	49	9	491	114	123
New Moston	163	96	49	203	16	17	1	213	93	57
Northenden	293	175	205	316	43	65	6	337	124	184
Openshaw	426	271	201	515	20	46	23	391	208	137
Rusholme	612	227	142	669	43	61	3	652	143	121
Sharston	298	246	175	325	19	77	8	379	178	118
Wilbraham	203	161	81	258	21	45	—	254	159	189
Withington	475	293	120	522	34	55	2	521	190	140
Totals	8,715	4,180	3,732	9,002	643	1,136	142	9,211	3,035	3,280
Total, 1945	7,412	4,195	3,878	7,744	855	1,336	128	8,715	4,180	3,732
,, 1944	6,495	4,171	3,663	8,865	981	1,406	109	7,412	4,195	3,878

Child Protection.

Foster Children.

There were 106 foster children at the beginning of 1945. During the year 216 new cases were placed on the register and 200 were removed, leaving a total of 122 at the end of the year. Of the 216 new cases 95 were illegitimate.

The following particulars show how homes were found for the 216 children concerned:—

Homes arranged by Child Protection Visitor ..	for	37	children
,, ,, friends of the parents ..	,,	64	,,
,, ,, relatives of the parents ..	,,	7	,,
,, ,, doctors and hospital almoners	,,	6	,,
,, ,, voluntary society	,,	1	child
,, ,, Ministry of Pensions ..	,,	2	children
,, ,, a foster mother	,,	1	child
,, ,, through public advertisement	,,	2	children
Returned to foster mothers	,,	15	,,
Remaining in the care of matrons of nursing homes ..		2	,,
Placed with a view to adoption		3	,,
Accommodated in private nurseries		76	,,
Total		216	,,

The number of visits paid by the Child Protection Visitor to foster children was 1,424. 2 children were removed from unsatisfactory homes at the request of the Child Protection Visitor.

200 children ceased to come under Child Protection provisions for the following reasons:—

Returned to parent or relative	129
Attained the age of 9 years	9
Sent to special homes	4
Removed to other districts	7
Admitted to hospitals	10
Adopted	39
Deaths	2
Total	200

Foster children who attained the age of 9 years during 1946.

9 foster children attained the age of 9 years. 4 of these children have since returned to their parents and 1 has been legally adopted by the foster mother. 4 children are remaining with the foster mothers who would like to adopt them but the mothers will not give consent.

Foster Mothers.

There were 95 registered foster mothers at the beginning and 83 at the end of the year.

In January, 7 foster mothers received payments of £1 weekly from the Health Committee and this number increased to 8 in December. The numbers of foster children concerned were 8 and 9 respectively.

Adoptions.

During the year 355 applications were received from people wishing to adopt children. Of the 355 prospective adopters, 34 cancelled their applications, 14 obtained children from another source, and 4 were considered unsuitable.

330 applications were received from mothers who wished to have their children adopted and 26 expectant mothers living outside the City made application before their babies were born, but only 4 carried on with the adoption afterwards.

Of the 330 applications from mothers, 32 mothers decided to keep their babies, 16 cancelled their applications for other reasons, 15 had their babies adopted through another source, 7 adopted their own babies and 3 children died.

200 children were introduced to adopters and 134 of these were legally adopted during 1946.

19 cases were notified under Section 7 (3) of the Adoption of Children (Regulation) Act, 1939, and 66 cases were notified where the mother handed her child direct to the adopter.

During the year the Child Protection Visitor paid 1,135 visits in connection with adoptions. 29 homes were visited for approval at the request of Adoption Societies and 4 of these homes were considered to be unsuitable.

Third party introductions are kept under constant supervision by the Child Protection Visitor, as in some cases after a child has been introduced and difficulties arise no one assumes responsibility. The adoptions which have been arranged privately between mother and adopter are also closely supervised. Very often no steps are taken to obtain a legal adoption order until the visitor has impressed upon the adopter the necessity for giving the child security.

Care of Illegitimate Children and their Mothers.

The health visitor specially appointed for these duties acts as a liaison between the mother and the Health and Social Welfare Departments and voluntary organisations, from whom assistance can be obtained by the mother during ante-natal or post-natal periods.

The following particulars indicate the extent of the Department's activities in connection with special problems concerning married and unmarried women and widows and their illegitimate children:—

Expectant mothers referred to Welfare Officer for advice and assistance	231
Illegitimate children reported to Welfare Officer as in need of assistance	156
Office interviews	577
Home visits	572
Visits to social workers and others	22
Attendances at Court	26

The total number of illegitimate children for whom the assistance of the Department was sought was 357, consisting of:—

156 children of mothers seen in the post-natal period only.
169 children of mothers seen in the pre-natal period.
32 children of mothers seen in the pre-natal period during 1945.

In addition 63 cases reported during 1945 were re-investigated.

Home circumstances of Illegitimate Children.

(a) *Children remaining with their Mothers.*

Mother	In lodgings or absorbed into family	With mother in a hostel	With mother awaiting adoption	With mother and putative father	With mother and her husband	With a foster mother	Deaths	Total
Single	170	3	6	10	—	7	18	214
Married ..	26	—	5	7	10	5	6	59
Widow	12	—	—	—	—	—	—	12
Divorcee ..	2	—	—	—	—	1	1	4
	210	3	11	17	10	13	25	289

(b) *Children separated from their Mothers.*

Mother	Legally adopted	With prospective adopters	Residential Homes	Booth Hall Hospital	Deaths	Total
Single	22	13	4	6	1	46
Married	8	7	2	3	—	20
Widow	1	1	—	—	—	2
Divorcee	—	—	—	—	—	—
	31	21	6	9	1	68

The action taken by the Welfare Officer as regards cases referred to the Department for advice and assistance was as follows:—

	No. of cases
Advised *re* adoption	170
Advised *re* affiliation orders	18
Assisted with baby clothes secured from voluntary organisations	83
Assisted with baby clothes secured from departmental sources	18
Referred to Social Welfare Committee for assistance ..	66
Referred to Poor Man's Lawyer for legal aid	18
Accommodation in maternity unit arranged	7
Assisted to find lodgings	10
Assisted to find employment	6
Children placed with foster mothers	15
Further investigation and supervision necessary ..	31

21 women who were expecting illegitimate babies were admitted to the Health Committee's Rose Hill Convalescent Home for the pre-natal period and 11 others were accommodated in maternity homes belonging to voluntary organisations.

Where girls were admitted to the hostels belonging to the religious denominations, the arrangements were made through the appropriate Moral Welfare Workers.

The 63 children whose cases were re-investigated or carried over from 1945 were of 37 single mothers, 25 married mothers, and 1 widow.

These cases were dealt with as follows:—

Adoption pending in 1945, legally adopted 1946	23
Placed for adoption 1946, legally adopted 1946	13
Placed for adoption 1946, adoption pending	4
Mother assisted to place child in a day nursery	6
Investigation and advice	5
Assisted with clothing	4
Under observation	8
	63

Welfare Hostel.

In April, 1946, the Health Committee acquired "Knowle House," Handforth, as a gift, through the generosity of Mr. and Mrs. E. C. C. Hunter, of Gorsey Brow, Mobberley. The house stands in two acres of grounds and is in very pleasant rural surroundings. The Committee also purchased from Mr. Hunter 7 acres of pasture land adjoining the house.

When the necessary alterations have been completed the Health Committee intend to use the premises as a welfare hostel for 15 illegitimate babies and their mothers.

Recuperative Centre.

By an arrangement with the Community Council of Lancashire, mothers and children are admitted to Brentwood Recuperative Centre, Marple, Cheshire, on the recommendation of the Maternity and Child Welfare Section, the cost of maintenance being borne by the Health Committee.

17 mothers and 47 children were admitted to the Centre. The ages of the mothers ranged from 22 to 39 years, and 39 children were under 5 years old. The families were visited by the health visitors a few days after discharge and revisited at frequent intervals.

The three primary reasons for recommending the mothers for admission to Brentwood are :—

(1) Lack of training and experience in housewifery and child management.

(2) Ill-health and lowered vitality due to too rapid childbearing, depressing surroundings and environment, and possibly in the case of some mothers, malnutrition.

(3) Unsatisfactory home conditions, including lack of domestic facilities.

(4) Difficulties between parents, causing the mother to lose interest in her home and children.

Marked improvement in both mental and physical condition of the family s evident after a stay in Brentwood. In most cases the mothers look more alert and happy, find pleasure in household tasks, and the children benefit greatly from the training given in the Centre. By frequent visits from the health visitor it is hoped to maintain and still further improve the standard of living of these families.

Health Visiting.

The health visitors supervise generally the nutrition and development of children under school age, the health and welfare of their mothers, and the teaching of mothercraft. Their duties also include the investigation and following up of certain infectious diseases, scabies, and verminous conditions and health education. In December, 1946, the health visitors had under observation 53,103 children under 5 years.

Notification of Births.

The total number of notifications was 16,486 compared with 13,449 in 1945 and 14,123 in 1944. A number of these were notified by St. Mary's Hospital, Prestbury.

Source of Notification and Place of Birth.

Manchester		St. Mary's Hospital, Prestbury		Totals	
Live	Still	Live	Still	Live	Still
14,672	551	1,234	29	15,906	580

Total registered births numbered 14,414 and of these 1,134 were illegitimate.

It has been possible in 14,029 births (13,673 live births and 356 stillbirths), representing 97 per cent. of the total registered births in the City, to consider the place in family of each birth, and this is shown in the following tables.

Full-time and premature births have been separated, the accepted standard birth weights of 5½lbs. or under for premature babies having been adopted in 1938.

Births investigated during 1946 arranged to show place in family.

Place in Family	Live Births				Live Births		Still-births				Still-births		Live and Still-births
	Legitimate		Illegitimate		1946	1945	Legitimate		Illegitimate		1946	1945	1946
	Full time	Pre-mature	Full time	Pre-mature	Per cent.	Per cent.	Full time	Pre-mature	Full time	Pre-mature	Per cent.	Per cent.	Per cent.
1st	4,699	508	397	47	41·33	38·33	76	47	8	3	37·64	38·23	41·24
2nd	3,536	274	178	10	29·24	28·14	45	41	3	5	26·40	20·82	29·17
3rd	1,731	129	102	9	14·42	15·14	24	24	1	1	14·04	17·41	14·40
4th	840	51	50	2	6·89	7·94	11	11	1	—	6·46	9·90	6·89
5th	407	31	28	3	3·43	4·19	10	8	—	1	5·34	4·44	3·48
6th	231	17	18	3	1·97	2·60	2	8	—	—	2·81	3·75	1·99
7th	139	13	5	—	1·15	1·50	2	9	—	—	3·09	2·39	1·20
8th	88	3	6	—	·71	·84	4	1	—	—	1·41	·34	·73
9th	53	4	3	—	·44	·56	5	1	—	—	1·69	1·36	·47
10th	20	—	2	—	·16	·32	1	—	—	—	·28	·34	·16
11th	19	—	1	—	·15	·19	—	1	—	—	·28	·68	·15
12th	4	3	—	—	·05	·13	2	—	—	—	·56	—	·06
13th	7	—	—	—	·05	·09	—	—	—	—	—	—	·05
14th	—	—	2	—	·01	·03	—	—	—	—	—	—	·01
15th	—	—	—	—	—	—	—	—	—	—	—	·34	—
Totals	11,774	1,033	792	74	100·00	100·00	182	151	13	10	100·00	100·00	100·00

13,673

356

14,029

It is interesting to compare the size of the average family and the age of the mother of each new investigated birth in 1946 as compared with 1935 when the analysis was first made. Tables for these two years are as follows :—

(1) Age of mothers at birth of children during 1946 showing place in family of each birth.

Age Groups Years	Place in Family														Total Births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
15—	289	28	2	—	—	—	—	—	—	—	—	—	—	—	319
20—	2,158	791	166	40	11	3	—	—	—	—	—	—	—	—	3,169
25—	1,954	1,420	640	204	83	28	6	3	3	—	—	—	—	—	4,341
30—	899	1,170	686	345	163	103	44	23	13	—	—	1	—	—	3,447
35—	324	474	371	251	145	100	71	48	23	9	5	4	1	—	1,826
40—	51	91	91	89	68	42	45	27	25	11	15	4	5	—	564
45—	4	5	2	5	6	—	—	1	1	2	1	—	1	2	30
	5,679	3,979	1,958	934	476	276	166	102	65	22	21	9	7	2	13,696

(2) Age of mothers at birth of children during 1935 showing place in family of each birth.

Age Groups Years	Place in Family																			Total Births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
15—	294	25	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	320
20—	1,617	718	184	39	9	1	1	—	—	—	—	—	—	—	—	—	—	—	—	2,569
25—	1,419	1,054	540	253	97	44	19	2	2	—	—	—	—	—	—	—	—	—	—	3,430
30—	489	627	486	337	207	140	74	50	17	7	5	1	—	—	—	—	—	—	—	2,440
35—	118	288	235	194	159	132	111	88	65	30	16	6	4	1	2	—	—	—	—	1,449
40—	18	40	50	68	69	53	53	40	31	32	18	6	7	5	1	—	—	—	—	494
45—	—	2	—	5	9	6	4	1	6	7	5	5	4	3	1	—	—	—	1	58
	3,955	2,754	1,496	896	550	376	262	181	121	76	44	18	15	9	4	—	—	—	1	10,760

The 1946 births are further analysed to show the difference between legitimate and illegitimate births and live and still-births.

Age of mothers at birth of live children during 1946.

(A) *Place in family of each investigated birth* (*legitimate*).

Age Groups Years	Place in Family													Total Births
	1	2	3	4	5	6	7	8	9	10	11	12	13	
15— ..	209	22	2	—	—	—	—	—	—	—	—	—	—	233
20— ..	1,935	715	152	34	9	3	—	—	—	—	—	—	—	2,848
25— ..	1,776	1,336	570	187	72	23	6	3	2	—	—	—	—	3,976
30— ..	842	1,096	646	320	149	89	38	22	9	—	—	1	—	3,212
35— ..	298	449	343	246	129	91	68	40	22	7	4	3	1	1,701
40— ..	44	86	87	77	61	39	38	25	22	10	14	3	5	511
45— ..	4	4	2	5	6	—	—	1	1	2	1	—	1	27
	5,108	3,708	1,802	869	427	245	150	91	56	19	19	7	7	12,508

(B) *Place in family of each investigated birth* (*illegitimate*).

Age Groups Years	Place in Family														Total Births
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
15—	76	6	—	—	—	—	—	—	—	—	—	—	—	—	82
20—	190	57	10	5	2	—	—	—	—	—	—	—	—	—	264
25—	122	56	55	13	8	3	—	—	—	—	—	—	—	—	257
30—	32	47	26	18	9	12	1	1	1	—	—	—	—	—	147
35—	17	12	13	8	10	5	1	4	—	1	—	—	—	—	71
40—	3	2	2	8	2	1	3	1	2	1	1	—	—	—	26
45—	—	1	—	—	—	—	—	—	—	—	—	—	—	2	3
	440	181	106	52	31	21	5	6	3	2	1	—	—	2	850

Age of mothers at birth of stillborn children during 1946.

(A) *Place in family of each investigated stillbirth* (*legitimate*).

Age Groups Years	Place in Family												Total Births
	1	2	3	4	5	6	7	8	9	10	11	12	
15—	4	—	—	—	—	—	—	—	—	—	—	—	4
20—	29	14	3	1	—	—	—	—	—	—	—	—	47
25—	55	26	15	4	2	2	—	—	1	—	—	—	105
30—	23	26	13	6	5	2	5	—	3	—	—	—	83
35—	7	13	15	7	5	4	2	4	1	1	1	1	61
40—	3	3	2	4	5	2	4	1	1	—	—	1	26
	121	82	48	22	17	10	11	5	6	1	1	2	326

(B) *Place in family of each investigated stillbirth (illegitimate).*

Age Groups Years	Place in Family					Total Births
	1	2	3	4	5	
15—	—	—	—	—	—	—
20—	4	5	—	—	—	9
25—	1	2	1	—	—	4
30—	2	1	1	1	—	5
35—	2	—	—	—	1	3
40—	1	—	—	—	—	1
	10	8	2	1	1	22

Stillbirths.

The number of stillbirths allocated to the health visitors for investigation was 356.

Found Children.

The health visitors found 1,604 other children belonging to families which had moved into Manchester during the year. The year of their birth was as follows :—

455 born 1946.
390 ,, 1945.
384 ,, 1944.
231 ,, 1943.
144 ,, 1942.

Day-minded children.

A register of children whose mothers go out to work and who are cared for by relatives or neighbours is maintained.

The average number of day-minded children on the register during the year was 235 and the number of applications received for day-minders was 57.

Deaths.

993 deaths occurred amongst children under 5 years of age.

The classification according to age is :—

886 children under 1 year.
52 ,, 1—2 years.
21 ,, 2—3 years.
17 ,, 3—4 years.
17 ,, 4—5 years.

The distribution according to age of children who died under 1 year was as follows :—

Died under 1 day	Died 1 to 7 days	Died 1 week to 4 weeks	Died 1 month to 3 months	Died 3 months to 6 months	Died 6 months to 9 months	Died 9 months to 12 months	Total
116	159	199	172	142	75	23	886

The following table gives mortality rates for the past ten years amongst children 1—5 years. This is based upon the number of live births for the year.

Infant Mortality Rate and Case Mortality Rates for Measles and Whooping Cough.

Year	Infant Mortality Rate	Mortality Rate 1—2 years	Mortality Rate 2—5 years	Mortality Rate 1—5 years	Total cases of Measles		Total known cases of Whooping Cough	
					Cases	Mortality Rate per cent	Cases	Mortality Rate per cent
1937 ..	76·30	14·3	13·5	27·8	6,550	·67	1,403	3·85
1938 ..	69·03	9·8	11·5	21·3	9,949	·60	1,075	1·21
1939 ..	61·09	6·7	7·9	14·6	574	—	1,406	2·13
1940 ..	70·18	10·2	10·8	21·0	14,844	·19	670	1·04
1941 ..	84·47	10·6	16·3	26·9	3,869	·52	4,715	1·38
1942 ..	64·52	5·5	7·6	13·1	10,468	·16	1,103	1·45
1943 ..	60·88	5·9	6·8	12·7	4,419	·27	3,277	1·28
1944 ..	53·59	5·6	3·8	9·4	6,736	·13	2,003	1·30
1945 ..	55·80	3·7	6·0	9·7	5,596	·14	1,835	1·36
1946 ..	63·71	3·7	3·9	7·7	3,800	·08	2,265	1·41

Infant and Child Mortality per 1,000 Births.

Quinquennial periods 1911—1946.

Quinquennial Period	Infant Mortality	Child Mortality, 1—2 years	Child Mortality, 2—5 years
1911—1915	**133·13**	45·0	35·5
1916—1920	**104·51**	34·9	34·3
1921—1925	**95·85**	34·2	23·9
1926—1930	**87·88**	26·2	20·9
1931—1935	**77·34**	18·3	17·6
1936—1940	**70·81**	11·3	11·3
1941—1945	**63·85**	6·3	8·1
1946	63·71	3·7	3·9

Expectant Mothers.

Health visitors also visited at the end of six months all mothers who had given birth to a stillborn child or to a child who had died before reaching the age of 1 month, in order to ensure adequate ante-natal care should she subsequently become pregnant. 372 stillbirths and 315 neo-natal deaths occurred in the City during 1945, and 1,299 special visits were made by the health visitors during 1946 to these mothers. In this way 47 expectant mothers who might require special care were brought to the notice of the Department.

Causes of Deaths in Children under 1 year.

Manchester figures (52 weeks).

Ward	Deaths of children under 1 year	Bronchitis and Pneumonia	Prematurity	Debility and Marasmus	Dystocia	Enteritis	Convulsions	Tuberculosis	Syphilis	Accidental Deaths	Influenza	Measles	Whooping Cough	Other Causes
All Saints	30	4	6	1	—	7	—	—	—	3	—	—	—	9
Ardwick	43	8	6	—	—	12	—	—	—	4	—	—	2	11
Beswick	18	3	5	—	—	2	—	—	—	—	1	—	1	6
Blackley	14	1	1	—	—	1	—	1	—	—	—	—	—	10
Bradford	32	7	5	—	—	7	—	—	—	—	—	—	—	13
Cheetham	25	5	3	1	—	—	—	—	—	—	—	—	1	15
Chorlton-cum-Hardy	37	8	10	—	—	6	1	—	—	—	—	—	—	12
Collegiate	18	3	5	—	—	3	1	—	—	—	—	—	1	5
Collyhurst..	13	3	—	—	—	3	—	1	—	1	—	—	1	4
Crumpsall	23	2	8	—	—	3	—	1	—	2	—	—	2	5
Didsbury	32	4	6	—	—	7	2	—	—	1	—	—	1	11
Gorton North	16	1	—	—	—	5	—	—	—	—	—	—	2	8
Gorton South	37	7	4	1	2	4	—	1	—	4	1	—	—	13
Harpurhey	27	2	8	—	—	6	—	—	—	—	—	—	—	11
Levenshulme	20	5	7	—	—	3	—	—	—	—	—	—	2	3
Longsight	20	5	5	1	—	3	—	—	—	1	—	—	—	5
Medlock Street	38	5	11	2	1	7	1	—	—	—	—	—	1	10
Miles Platting	12	2	—	—	—	2	1	—	—	—	—	—	—	7
Moston	16	3	3	—	—	3	—	—	—	—	—	—	—	7
Moss Side East	42	11	5	1	—	11	2	1	—	2	—	—	1	8
Moss Side West	42	3	13	—	—	10	1	—	—	—	1	1	1	12
New Cross	23	4	4	—	—	2	—	1	—	—	—	—	2	10
Newton Heath	17	2	3	2	—	—	1	—	1	1	—	—	1	6
Openshaw	31	4	4	2	1	4	2	—	2	1	—	1	1	9
Rusholme	17	2	5	—	—	4	—	—	—	—	—	—	—	6
St. Clement's	3	1	—	—	—	—	—	—	—	1	—	—	—	1
St. George's	47	6	19	—	—	9	—	—	—	—	—	—	—	13
St. John's	6	1	2	—	—	1	—	—	—	1	—	—	—	1
St. Luke's	32	2	15	—	—	6	2	—	1	—	—	—	—	6
St. Mark's	30	6	7	—	—	7	1	1	—	—	—	—	—	8
St. Michael's	23	5	6	1	—	5	—	—	—	1	—	—	1	4
Withington	55	8	13	1	—	11	2	1	1	—	—	—	—	18
Wythenshawe	47	6	10	—	—	12	—	2	—	1	—	—	—	16
Total	886	139	199	13	4	166	17	10	5	24	3	2	21	283

Welfare of Women and Children on Canal Boats.

The arrangements with regard to the provision of welfare services for women and children living on canal boats were reviewed in November, 1945.

The canal boats coming into Manchester remain at the tying-up places for varying periods, sometimes only for an hour or two and seldom for more than 3 days.

None of the Manchester canal carrying companies allow women and children on board their boats, but they are to be found on a few " narrow " boats coming into the City.

Arrangements were made with an official of a canal carrying company at the main tying-up place to obtain advance information with regard to the composition of the crew of boats proceeding to the City. When it has been ascertained that there are women and children on board, the health visitor and canal boats inspector have visited the boat together. The health visitor has seen the children and has given the mother advice as to welfare services which are available to her and facilities for obtaining supplies of cod liver oil, orange juice, and vitaminised foods at the nearest welfare centre. The local welfare centre is situated only a short distance from the three tying-up places in the City. Visits made by health visitors have been comparatively infrequent because few boats have women and children on board. Nevertheless it is felt that the continuance of these arrangements has been fully justified.

It would appear, however, that there is a need for the Canal Boats Regulations to be revised and amended so as to prohibit women and children living on canal boats.

Co-operation with School Health Service.

A report on every child reaching school age and known, on the health visitor's final visit, to be suffering from medical defect or to have an unsatisfactory family history, is referred to the School Health Department. 667 such summaries were sent during the year, classified as follows :—

Unsatisfactory condition in child	422
History of Tuberculosis in child	12
,, ,, Tuberculosis in family	107
,, ,, Rheumatism in child	11
,, ,, Rheumatism in family	73
Unsatisfactory history in family	42
Total	667

Admission to hospital of children under 5 years of age.

30 beds were retained by the Corporation at the Duchess of York Hospital for Babies: 20 cots for children under one year and 10 beds for children one to three years. Recommendations for admission to these and to Booth Hall Hospital are made by the medical officers of welfare centres administered by the Department.

The number of children admitted to each hospital is shown below :—

		Number Admitted
Duchess of York—	Cots	173
	Large beds	113
Booth Hall		91
	Total	377

The diagnosis made in the case of children under one year admitted to the Duchess of York and Booth Hall hospitals was as follows :—

	Duchess of York Hospital	Booth Hall Hospital
Prematurity	12	1
Congenital diseases and defects	12	2
Nutritional conditions	29	14
Gastro-intestinal conditions	40	11
Respiratory conditions	29	5
Surgical conditions	35	9
Miscellaneous diseases of bacterial origin	7	4
Miscellaneous diseases of nervous origin	9	—
	173	46

Diagnosis of children over one year admitted to Duchess of York and Booth Hall Hospitals :—

	Duchess of York Hospital	Booth Hall Hospital
Nutritional disorders	10	3
Gastro-intestinal conditions	18	2
Respiratory conditions	28	6
Surgical conditions	35	5
Miscellaneous diseases of bacterial origin	10	1
Miscellaneous diseases of nervous origin	3	1
Infectious diseases	7	5
Tonsils and adenoids	2	22
	113	45

The ages of children on admission were :—

	Duchess of York Hospital	Booth Hall Hospital
Under 1 month	32	3
1—3 months	63	16
3—6 ,,	44	13
6—9 ,,	22	8
9—12 ,,	12	6
1—2 years	74	7
2—3 ,,	33	18
3—4 ,,	5	13
4—5 ,,	1	7
	286	91

Measles, German Measles, Whooping Cough, and Pneumonia.

Measles.

The Measles and Whooping Cough Regulations came into force in 1939. These provide for the notification by medical practitioners of all cases of measles and whooping cough to the Medical Officer of Health.

The investigation of infectious disease is directed towards securing good nursing for, and the isolation of, infected cases, preventing the spread of infection and more particularly reducing the risk to children under five years of age.

Measles was first made notifiable in 1916 and until 1942 it regularly appeared in epidemic form every two years. In 1940 the highest number of notifications in one week was 700. The 1942 epidemic showed two peak figures—450 notifications in one week in May and 460 in one week in November. The peak of the 1944–45 epidemic was reached in November with 530 notifications. The 1946–47 epidemic started in November, the peak being reached early in the following February with 1,253 cases.

The following table shows the number of cases of measles during the last four epidemics with a comparison of the deaths of children under and over five years of age :—

Measles—Years 1939—1946 (*inclusive*).

Year	Cases of Measles			Deaths		
	Over 5 years	Under 5 years	Total	Over 5 years	Under 5 years	Total
1939 ..	209	365	574	—	—	—
1940 ..	5,400	9,444	14,844	6	22	28
1941 ..	1,425	2,444	3,869	—	20	20
1942 ..	3,773	6,695	10,468	3	14	17
1943 ..	1,240	3,179	4,419	—	12	12
1944 ..	2,146	4,950	6,736	—	9	9
1945 ..	1,305	4,291	5,596	—	8	8
1946 ..	1,153	2,647	3,800	—	3	3

Number of notifications of Measles.

Cases notified by doctors	3,415	
Cases found by health visitors	385	
Total number of cases	3,800	
Total number of cases investigated..		3,800

This is a decrease of 1,796 compared with the previous year.

In addition 76 non-notified cases were found after complete recovery had been made and are classified as "late" cases.

The Health Committee has an arrangement with the Manchester and Salford District Nursing Institution for the nursing at home, where necessary, of children suffering from measles and its complications.

Incidence of Pneumonia in Measles.

	Total cases of Measles	Number complicated by Pneumonia	
		Nursed at home	Removed to hospitals
Recovered	3,797	12	38
Died	3	1	1
Total	3,800	13	39
Case mortality per cent.	0·079	7·69	2·56

German Measles.

All cases of German measles are notifiable, and only cases under 16 years of age are investigated by health visitors.

Cases notified	351
Cases investigated	275
Cases recovered..	351
Cases died	—

The total visits paid by the health visitors = 473

Whooping Cough.

Cases notified	2,265
Cases investigated	2,265

In addition 62 cases were discovered after complete recovery had been made and were classified as " late " cases.

The following table shows the incidence of pneumonia in whooping cough.

Incidence of Pneumonia in Whooping Cough.

	Total cases of Whooping Cough	Number complicated by Pneumonia	
		Nursed at home	Removed to hospitals
Recovered	2,233	16	49
Died	32	8	17
Total	2,265	24	66
Case mortality per cent.	1·41	33·3	25·75

Care of Aged and Infirm Persons.

(Section 34, Manchester Corporation (General Powers) Act, 1930.)

227 visits were paid to elderly persons referred to the Medical Officer of Health as suffering from serious infirmity and unable to provide themselves with proper care and attention. 85 have been under supervision, compared with 65 in 1945, and in each case arrangements were made for their care.

The conditions under which many of these elderly persons were found to be living were pitiable, and there is a need for the early attention of the Department to be drawn to such cases.

Further provision is necessary for the care of old people through health visiting and other channels.

Patients recommended to hospital, for whom accommodation was not available.

During the year 277 such patients were referred to the health visitors for alternative arrangements to be made, compared with 285 during 1945. 271 cases had been recommended for admission to Crumpsall Hospital and 6 to Withington Hospital. Many, however, were seriously ill and were found to be living alone or to be without neighbourly help.

The following table shows the arrangements ultimately made by the health visitors :—

Crumpsall Hospital—

Number admitted to Crumpsall Hospital	214
,, ,, other hospitals	3
,, ,, Crumpsall Hospital (out-patients' department) ..	—
Number nursed at home by friends or neighbours or district nurse	33
Number who died before admission to hospital could be arranged	21
Total	271

Withington Hospital—

Number admitted to Withington Hospital ..	3
,, ,, other hospitals	1
,, nursed at home by friends or neighbours or district nurse	1
Number who died before admission to hospital could be arranged	1
Total	6

Treatment of Scabies and Verminous Conditions.

Sources of Notification of Lice Infestation.

	1942	1943	1944	1945	1946
School Health Service	1,014	1,194	1,438	1,790	1,612
General Practitioners	12	26	39	45	23
Voluntary and Municipal Hospitals	1	9	8	21	23
Centre Medical Officers	33	18	27	21	10
Health Visitors	348	295	330	47	37
Voluntary Applications	42	66	135	115	88
Discovered at Monsall	122	1,324	879	900	618
Salvation Army	23	43	221	159	78
H.M. Forces	—	—	14	1	—
Civil Defence Evacuees	11	1	1	—	—
Sanitary Inspectors	—	70	40	7	2
Business Houses	—	9	7	6	3
Day Nurseries	—	—	—	2	3
Ministry of Labour	21	1	—	—	—
Ministry of Health	4	—	—	3	2
Social Welfare	1	6	—	5	15
Total..	1,632	3,062	3,139	3,122	2,514

Circular 2831 of the Ministry of Health issued in 1943 urged Welfare Authorities within the scope of their powers to assist mothers and young children in the promotion of cleanliness and good habits and the elimination of verminous conditions. The Minister of Health was of the opinion that the primary responsibility for the cleanliness of children rests with their mothers, and this being so " the education of the mothers, present and future, is of the first importance."

In the course of their home visits the health visitors always advise mothers on the treatment of lice infestation, but certain difficulties arise in following up adolescent workers notified as verminous. Evening appointments have to be made and these are not always kept by the person notified. This is a waste of time and the present staff is inadequate for dealing with this extra visiting.

Treatment of Verminous Conditions.

The following table shows the number of persons treated for verminous conditions at Monsall and Withington clinics during the last 5 years.

Withington clinic was closed on the 18th November, 1944, in order to economise in staff and equipment following the reduction in notified cases of scabies.

2,295 visits were made to the homes of verminous persons, exclusive of those paid to persons already under supervision in the course of health visiting.

Celetane oil and D.D.T. emulsion are used at Monsall clinic in the treatment of head infestation and D.D.T. powder is applied by special powder gun to clothing after steam stoving to prevent early re-infestation.

Persons treated for verminous conditions.

Year	Clinic	Males Adult	Females Adult	School Children	Children under 5	Total	
1942 ..	Monsall	110	363	415	125	1,013	1,039
	Withington	—	9	11	6	26	
1943 ..	Monsall	202	1,017	778	323	2,320	2,456
	Withington	1	58	52	25	136	
1944 ..	Monsall	431	1,205	1,088	434	3,158	3,367
	Withington	—	69	104	36	209	
1945 ..	Monsall	329	751	662	222		1,964
1946 ..	Monsall	205	532	532	157		1,426

The Department has a scheme for supplying special steel combs at cost price to mothers. 346 steel combs were distributed compared with 394 during 1945.

Scabies.

The main source of notification of scabies is the Education Department, but many cases are brought to the notice of health visitors, either as contacts of those notified by the School Health Service or as new cases.

The source and number of notifications received during 1946 and the preceding years was as follows :—

Sources of notification of Scabies.

	1942	1943	1944	1945	1946
School Health Service	3,121	2,806	2,282	1,670	1,494
Booth Hall Hospital and other Municipal Hospitals	9	253	120	73	57
General Practitioners	2,043	248	1,959	1,571	1,184
Centre Medical Officers	262	262	157	211	183
Health Visitors	2,875	5,326	3,043	1,842	1,132
Applied voluntarily	714	880	1,347	1,130	783
Skin Hospital	896	776	638	559	579
Discovered at Monsall	5	35	203	61	13
H.M. Forces	20	10	11	—	—
Salvation Army	5	10	13	—	1
Voluntary Hospitals	35	92	47	40	48
Social Welfare	—	—	—	4	6
Rest Centres	25	6	10	—	—
Tuberculosis Clinic and N.S.P.C.C.	8	6	3	—	—
Sanitary Section	3	2	1	2	—
Ministry of Labour	—	—	8	—	4
Ministry of Health	4	7	7	4	—
Business Houses	—	41	29	20	17
Day Nurseries	—	—	—	28	15
Total	10,025	12,950	9,878	7,215	5,516

The number of persons treated at Monsall and Withington Clinics is shown in the following table :—

Treatment for Scabies.

Year	Clinic	Males Adult	Females Adult	School Children	Children under 5	Total Persons	
1942 ..	Monsall	1,454	3,361	1,408	1,454	7,677	8,523
	Withington	107	357	211	171	846	
1943 ..	Monsall	1,748	3,869	1,791	1,586	8,994	11,234
	Withington	260	961	607	412	2,240	
1944 ..	Monsall	1,535	3,249	1,556	1,239	7,579	10,795
	Withington	389	1,389	878	560	3,216	
1945 ..	Monsall	1,313	2,951	1,309	1,052		6,625
1946 ..	Monsall	1,212	1,996	871	740		4,819

Scabies is treated by two applications of an emulsion of benzyl benzoate with an interval of from one to four days between the first and second treatments.

The health visitors paid 6,729 visits to homes in which scabies occurred.

Monsall Clinic provides a 12-hour service on Monday and Thursday of each week to suit the convenience of workers unable to attend during the day.

National Society for the Prevention of Cruelty to Children.

The Department is again indebted to this Society for assistance in dealing with certain difficult families. During the year help was sought in 30 cases, compared with 47 in 1945 and 69 in 1944.

Nursing Homes Registration.

(Public Health Act, 1936—Sections 187—192.)

At the end of the year there were 18 registered nursing homes in the City, of which 6 were registered for maternity patients, 4 for medical, 5 for maternity, medical and surgical, 1 for maternity and medical, 1 for surgical, and 1 for medical and surgical cases. 16 applications were received from voluntary hospitals for exemptions under Section 192 and all were granted.

All registered nursing homes were inspected at intervals and 48 visits were paid during the year.

Home Helps and Domestic Helps Services.

A home help service is provided by the Department for attendance at maternity cases or where there are children under school age in the household.

25 full time helpers are employed in the service and their duties include cleaning, washing, cooking, and shopping. They attended 504 cases over a total period of 1,018 weeks and in 164 instances the full fee was paid. In the remaining cases the charge was based on an assessment according to family financial circumstances.

The majority of applications are received at welfare centres, by midwives, and at the central office. 884 such applications were made during 1946 and 209 were subsequently withdrawn by the applicant.

Under the powers conferred by Defence Regulation 68E., a domestic help scheme was commenced in March, 1946, employing 25 full time helpers. The services of a domestic help are available in cases of sickness and the duties of the helpers and the fee normally charged for the service are identical with the home help service. The workers in the two services are, in fact, interchangeable.

57 applications were received for domestic help, of which 5 were cancelled by the applicant and 52 cases were attended by helpers.

Day Nurseries.

On 1st April, 1946, there was a change in administrative responsibility for the provision of day nursery accommodation. Nurseries which were provided as a war-time measure at the full cost of the Ministry of Health, then became the responsibility of the Welfare Authority with a grant from the Ministry of 52·67 per cent. of the net cost of maintenance. This change necessitated considerable adjustment as regards finance, purchase of stores, and other matters.

In accordance with Circulars issued by the Ministry, consultation with the Local Education Authority was also necessary in relation to the provision of nursery classes and nursery schools for children from 2 to 5 years old.

The Committee's 30 day nurseries were continued during 1946 and the accommodation which provides for 1,508 children was fully occupied. All the nurseries have waiting lists for admission and the facilities are in great demand by women who work in factories and business premises between 7-0 a.m. and 7-0 p.m.

No change was made in the charge for admission, which is 1s. 0d. per child for each day, but this question is under review. At each nursery the children are provided with all necessary meals, nursing and medical care, and educational facilities.

Work of Investigators.

In all cases where a charge to the public is made for Maternity and Child Welfare Services provided by the Health Committee, payment may be assessed according to financial circumstances of the applicant.

The Department's investigators made a total of 6,292 enquiries during 1946 with regard to applications for reduced payments for the services of home and domestic helps and midwives, for medical fees, and in connection with admissions to day nurseries, blind and deaf schools, maternity homes.

Visits by Health Visitors, 1946.

Type or cause of visit	Number
Children, 0–1 years, primary visits	14,771
,, ,, ,, subsequent visits	27,741
,, 1–2 ,,	16,594
,, 2–3 ,,	14,654
,, 3–4 ,,	12,008
,, 4–5 ,,	11,896
,, 5–14 ,,	6,438
,, visits *re* removal to and from the City	3,986
,, over 5 years, nursed out	14
,, interviews with parent only	6,671
Persons over 14 years	25,791
Aged and infirm persons	227
Stillbirths, primary visits	326
,, subsequent visits	243
Neonatal deaths	179
Mothers, primary visits during pre-natal period	2,460
,, subsequent visits during pre-natal period	889
Unsatisfactory home circumstances	116
Scabies, primary visits	3,368
,, subsequent visits	3,361
Verminous conditions, primary visits	1,461
,, ,, subsequent visits	834
Measles, primary visits	2,991
,, subsequent visits	1,887
German measles, primary visits	275
,, ,, subsequent visits	198
Whooping cough, primary visits	1,859
,, ,, subsequent visits	2,000
Pneumonia, primary visits	1,248
,, subsequent visits	906
Influenza, primary visits	38
,, subsequent visits	11
Infantile diarrhoea, investigations	14
Venereal disease, primary investigations, Defence Regulation 33B	69
,, ,, subsequent investigations, Defence Regulation 33B	1,164
,, ,, primary visits *re* other cases	128
,, ,, subsequent visits *re* other cases	304
Diphtheria immunisation	19,444
Whooping cough immunisation	613
Miscellaneous visits	15,092
Visits by student health visitors	27,432
Total	229,701

VENEREAL DISEASES.

Social conditions during the war years and subsequently have favoured the spread of venereal diseases. This increase in venereal diseases has manifested itself in Manchester, and there has again been an increase in the number of new cases and in the total attendances of persons at the Manchester Venereal Diseases Clinics.

The total number of persons attending the clinics in 1946 was 13,841, compared with 10,429 in 1945. Of this number, 5,962 were found to be suffering from conditions other than venereal disease, as compared with 4,674 the previous year.

The number of individuals with venereal disease attending for the first time was 4,223 compared with 2,749 in 1945.

Syphilis.

New cases of syphilis in males numbered 853 and in females 558, as against 445 and 482 respectively in the previous year.

Gonorrhoea.

New cases of gonorrhoea among males numbered 2,275 and among females 526, the comparable figures for 1945 being 1,266 and 545.

Discharges and Defaulters.

During the year 1,927 persons were discharged after undergoing the final tests of cure. On the other hand 814 persons ceased to attend before their courses of treatment were completed. Letters were sent to defaulters and many returned for treatment to the same or some other clinic, but the problem of dealing with these people remains a serious one.

Preventive Treatment Centre.

The Preventive Treatment Centre, opened at St. Luke's Hospital on 1st April, 1937, continues to perform useful work. This Centre treats men who have exposed themselves to possible infection and who present themselves within six hours of exposure at any hour of the day or night. In 1946 as many as 3,012 persons attended for treatment, for the most part during the night time and early hours of the morning. It is significant that no persons receiving this preventive treatment reported subsequently at any of the clinics with established disease.

Penicillin.

Penicillin treatment was given to 2,707 patients during the year ; the number treated in 1945 was 756.

St. Mary's Hospital.

The St. Mary's Hospitals Venereal Diseases Department at the Whitworth Street West Branch closed down at the end of the year as the accommodation utilised for this work was required for increased maternity clinics. Arrangements were made, therefore, for two extra female sessions to be held at the Manchester Royal Infirmary to treat patients who previously attended the Venereal Department at St. Mary's Hospitals.

Summary of Work Done at all the Centres during 1946.

	Syphilis		Soft Chancre		Gonorrhoea		Non-venereal or undiagnosed conditions		Totals		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals
1 umber of cases on 1st January nder treatment or observation	794	939	4	—	460	279	499	459	1757	1677	3434
2 umber of cases removed from e register during any previous ear which returned during the ear under report for treatment r observation of the same nfection	76	95	—	—	68	59	—	—	144	154	298
3 umber of cases dealt with for e first time during the year nder report (exclusive of cases nder Item 4) suffering from :—											
Syphilis, primary	527	121	—	—	—	—	—	—	527	121	648
,, secondary	169	262	—	—	—	—	—	—	169	262	431
,, latent in 1st year of infection*	24	27	—	—	—	—	—	—	24	27	51
,, all later stages ..	119	121	—	—	—	—	—	—	119	121	240
,, congenital	14	27	—	—	—	—	—	—	14	27	41
Soft Chancre	—	—	11	—	—	—	—	—	11	—	11
Gonorrhoea, 1st year of infection	—	—	—	—	2274	473	—	—	2274	473	2747
,, later	—	—	—	—	1	53	—	—	1	53	54
Non-venereal conditions ..	—	—	—	—	—	—	3121	1702	3121	1702	4823
Conditions remaining undiagnosed at 31st December ..	—	—	—	—	—	—	52	59	52	59	111
4 umber of cases dealt with for he first time during the year nder report known to have eceived treatment for the ame infection, or to have been nder observation, at other entres or Service Hospitals, r by General Practitioners pproved under Ministry of ealth Circular 2226	403	205	—	—	237	37	67	3	707	245	952
Totals of Items 1, 2, 3, and 4.	2126	1797	15	—	3040	901	3739	2223	8920	4921	13841
umber of cases discharged after ompletion of treatment and inal tests of cure or after diagnosis as non-venereal	212	124	6	—	1312	273	2596	1741	4126	2138	6264
. Number of cases which ceased to attend before completion of treatment and were, on first attendance, suffering from :—											
Syphilis, primary	62	39	—	—	—	—	—	—	62	39	101
,, secondary	59	79	—	—	—	—	—	—	59	79	138
,, latent in 1st year of infection*	2	9	—	—	—	—	—	—	2	9	11
,, all later stages ..	86	66	—	—	—	—	—	—	86	66	152
,, congenital	13	24	—	—	—	—	—	—	13	24	37
Soft Chancre	—	—	2	—	—	—	—	—	2	—	2
Gonorrhoea, 1st year of infection*	—	—	—	—	250	101	—	—	250	101	351
,, later	—	—	—	—	—	22	—	—	—	22	22
. Number of cases under treatment or observation which died :—											
From the disease	1	1	—	—	—	—	—	—	1	1	2
From treatment	—	—	—	—	—	—	—	—	—	—	—
From other causes	1	2	—	—	—	—	—	—	1	2	3
Number of cases which ceased to attend after completion of treatment but before final tests of cure	103	72	2	—	243	98	—	—	348	170	518
Number of cases transferred to other Centres, or to institutions, or to care of private practitioners	239	362	—	—	190	86	—	11	429	459	888
Number of cases remaining under treatment or observation on 31st December	1348	1019	5	—	1045	321	1143	471	3541	1811	5352
Totals of Items 5, 6, 7, 8, and 9. ese totals should agree with hose of Items 1, 2, 3, and 4)	2126	1797	15	—	3040	901	3739	2223	8920	4921	13841

Summary of Work Done at all the Centres during 1946—*continued.*

	Syphilis		Soft Chancre		Gonorrhoea		Non-venereal or undiagnosed conditions		Totals		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Tota
10. Number of cases in the following stages of syphilis included in Item 6 which failed to complete one course of treatment of either penicillin or of arsenic and bismuth :—											
Syphilis, primary	29	15	—	—	—	—	—	—	29	15	4
,, secondary	11	30	—	—	—	—	—	—	11	30	4
,, latent in 1st year of infection*	—	3	—	—	—	—	—	—	—	3	
,, all later stages ..	20	32	—	—	—	—	—	—	20	32	5
,, congenital	2	5	—	—	—	—	—	—	2	5	
11. Number of attendances :—											
(*a*) for individual attention of the medical officer(s) ..	27876	25331	107	—	12442	5316	7444	5248	47869	35895	837
(*b*) for intermediate treatment, *e.g.*, irrigation, dressing ..	1999	—	11	—	3186	2754	294	130	5490	2884	83
Total Attendances	29875	25331	118	—	15628	8070	7738	5378	53359	38779	921
12. In-patients :—											
(*a*) Total number of persons admitted for treatment during the year	33	10	—	—	12	—	1	—	46	10	
(*b*) Aggregate number of "in-patient days" of treatment given	446	160	—	—	83	—	6	—	535	160	6

							Other Diseases				
							M.	F.			
13. Number of cases treated with penicillin	122	34	—	—	2045	433	66	7	2233	474	27

	Under 1 year		1 and under 5 years		5 and under 15 years		15 years and over		Totals	
	M.	F.	M.	F.	M.	F.	M.	F.	M	F.
14. Number of cases of congenital syphilis in Item 3 above, classified according to age periods	2	4	—	2	4	7	8	14	14	27

	Microscopical		Cultural for Gonorrhoea	Serum		Cerebro-spinal fluid	Others fo diagnosis Venereal Disease
	for Syphilis	for Gonorrhoea		for Syphilis	for Gonorrhoea		
15. Pathological Work :—							
(*a*) Number of specimens examined at, and by the medical officer of, the Treatment Centre	391	9599	—	—	—	—	—
(*b*) Number of specimens from patients attending at the Treatment Centre sent for examination to an approved laboratory	38	5234	—	9530	726	4	2596

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* "Syphilis, latent in 1st year of infection," applies to cases presenting no clinical sign of syphilis but discovered (by blood test, etc.) to have contracted this disease within the preceding 12 months.

Health Education.

Lectures have been given by the Central Council for Health Education on behalf of the Health Department to various bodies. The Central Council have also held exhibitions at works and factories in the City showing the ravages of venereal disease and have by this means reached many thousands of workpeople. Pamphlets on the subject are distributed free of charge to the public when making enquiries in the Health Department and also at Child Welfare Centres, Industrial undertakings, Youth Clubs, Co-operative Guild Meetings, and on other appropriate occasions. Education by means of film shows in public cinemas has also been undertaken.

The Ministry of Health have also continued their nation wide propaganda by published articles and advertisements in all types of newspapers and journals, by posters on hoardings, in business premises, works, factories, public conveniences and public transport.

Regulation 33B.

During 1946, 190 cases have been notified but it was found impossible to investigate some of the notifications owing to the lack of information.

The following summary shows the results :—

Attending clinics since discharge from Crumpsall	98
Failed to attend after repeated visits	30
Failed to trace	2
Total	130

The total number of visits made by Health Visitors in connection with Regulation 33B, and patients discharged from Crumpsall Hospital during 1946, were:—

Primary visits	166
Subsequent visits	1,548

In the year under review it was found unnecessary to take court proceedings in any case. Persuasion and pressure was found effective in all instances.

WELFARE OF THE BLIND.

The Health Department is indebted to Mr. John W. Turner, the Superintendent and Secretary of the Manchester and Salford Blind Aid Society, for the following analysis and summary of the Register for the twelve months ended March 31st, 1947, the classification of cases of blindness certified and registered, and also for a summary of statistics for the ten years 1938 to 1947.

Blind persons over the age of 16 are dealt with by the Blind Persons' Welfare Committee, the Education Committee being responsible for the fees for training. The training of a blind person is subject to the approval of the Minister of Labour and National Service under the provisions of the Disabled Persons (Employment) Act, 1944.

The technical training of young persons and the employment of blind persons who are capable of work are provided for in the workshops at Henshaw's Institution for the Blind, Old Trafford. Brushes, baskets, mats, knitwear, boot and shoe making and repairing, etc., are made and carried out in these workshops and there are approximately 180 workers engaged.

There are 21 Home Workers dealt with by the Institution under an approved scheme and they receive direct augmentation of earnings. The workers engaged in the workshops receive augmentation of earnings to bring their weekly rate of pay in line with that of the lowest paid non-technical Corporation workman, provided basic earnings calculated over a four-week period are achieved.

The certification of blind persons is carried out by Dr. H. V. White, M.C., and Dr. H. H. McNabb is the referee in accordance with the provisions of the Blind Persons Acts.

Financial assistance is granted to necessitous blind persons who are registered as being ordinarily resident within the City. The grants awarded are taken, where necessary, to the homes of the people by the Home Teachers of the Manchester and Salford Blind Aid Society, who also teach the Braille and Moon methods ; the Blind Aid Society also assist them with pastimes and occupations and attend to their comfort and welfare generally. The average number of visits made per month is 1,800.

Homes for the aged men and women and those incapable of work are provided by the two voluntary agencies as follows :—

One home at Rhyl for approximately 24 males	Provided by Henshaw's Institution for the Blind.
One Home at Prestbury for approximately 23 females ..	
Two Homes at Pendleton for men and women	Provided by the Manchester and Salford Blind Aid Society.

During the year 84 new cases of blindness have been registered, 73 of these were over 50 years old. Out of a total of 1,159 cases on the register the number of blind children under 16 years old is 14 only, of whom 4 are infants under the age of 5 years.

The following analysis and summary of the register for the 12 months ended 31st March, 1947, and the classification of cases and cases of blindness were submitted to the City Council through the Blind Persons' Welfare Committee by the Manchester and Salford Blind Aid Society :—

Summary of Register of Blind Persons for 1946/47.

	Twelve months ended 31st March, 1947		Twelve months ended 31st March, 1946	
Number of cases on register		1,167		1,179
Add—				
Number of new cases		79		72
Removals into area		27		32
Cases re-certified		5		1
		1,278		1,284
Deduct—				
Number of deaths	90		86	
Removals out of area	26		29	
Cases de-certified	3		2	
	—	119	—	117
		1,159		1,167
	Males	Females	Males	Females
	582	577	585	582

Registration Statistics of Blind Population.

	At 31st March, 1947	At 31st March 1946
1. ANALYSIS OF REGISTER.		
Children:—		
Under 5 years of age	4	3
5 to 16 years of age :—		
At School..	10	12
Not at School..	—	1
Adults over 16 years of age :—		
Under training	18	19
Not training, but trainable	1	1
Trained, but unemployed	—	—
Employed at Blind Institutions or elsewhere..	190	185
Unemployable	936	946
	1,159	1,167
2. AGE PERIODS.		
0—5 years	4	3
5—16 ,, ...	10	13
16—21 ,, ...	15	14
21—40 ,, ...	153	159
40—50 ,, ...	131	131
50—60 ,, ...	189	193
60—65 ,, ...	119	118
65—70 ,, ...	126	125
70—80 ,, ...	270	265
80—90 ,, ...	132	131
90 and over	10	15
	1,159	1,167

Classification of cases of Blindness Certified and Registered, from 1st April, 1946 to 31st March, 1947.

	Males	Females	Total
New cases from 1st April, 1946, to 31st March, 1947 ..	35	44	79
Cases re-certified	4	1	5
12 males receiving B.P.S./D. Grants 5 females ,, B.P.S./D. ,, 15 males ,, B.W.C. ,, 33 females ,, B.W.C. ,, } 65 Grants ..			
Number of deaths during the twelve months	39	51	90

New Cases	Ages at which Blindness occurred			Present Age Period		
Age Periods	Males	Females	Total	Males	Females	Total
0— 1	1	—	1	—	—	—
1— 5	—	—	—	1	—	1
5—10	—	—	—	—	—	—
10—20	—	—	—	—	—	—
20—30	1	—	1	1	—	1
30—40	2	—	2	2	—	2
40—50	5	2	7	5	2	7
50—60	6	6	12	3	6	9
60—70	15	10	25	17	10	27
70—80	7	18	25	8	18	26
Over 80..	2	9	11	2	9	11
	39	45	84	39	45	84

	Males	Females	Total
Single	8	7	15
Widowed	8	25	33
Married and separated	1	—	1
Married..	22	13	35
	39	45	84
Physically and Mentally Defective.			
Mental	—	—	—
Deaf	1	4	5
Physical	1	—	1
Mental and Deaf	—	—	—
Deaf and Physical	—	1	1
	2	5	7

Manchester.

Causes of Blindness.

Section	Sub-sections	Males	Females	Total
A. Congenital and Undetermined Causes	1. Congenital, hereditary, and developmental defects	4	4	8
	2. Myopic Error	1	1	2
	4. Glaucoma, primary	7	5	12
	5. Cataract, primary	11	23	34
	9. Atrophy of Optic Nerve	2	—	2
B. Infectious and Bacterial	3. Syphilis :—			
	(*b*) Acquired	2	—	2
	4. Trachoma	2	—	2
	6. Measles	—	1	1
	9. Eczematous kerato-conjunctivitis	—	1	1
C. Traumatic and Chemical	1A. Industrial trauma	2	—	2
	2. Trauma :—			
	(*d*) War	1	—	1
D. General Diseases	2. Vascular diseases, including cerebral vascular lesions	5	2	7
	6. Diabetes..	—	2	2
E. No information obtainable	—	2	6	8
		39	45	84

Further, 67 cases were examined but found not to be blind within the meaning of the Blind Persons Act, 1920, including 1 removal into area.

Referee Service.

Seven examinations were carried out under the Referee Service, with the following results :—

Decision of Opthalmic Surgeon upheld	4
Decision of Ophthalmic Surgeon reversed, *i.e.* " Not Blind " to " Blind "	3
	7

Summary of Statistics for the last ten years (1938—47).

Year ended 31st March	Total on Register	New Cases Registered during the year	Cases Re-certified	Deaths	Cases De-certified	Transfers	
						Into Area	Out of Area
1938 ..	1,268	107	2	93	6	38	24
1939 ..	1,302	141	—	108	4	33	32
1940 ..	1,263	91	1	114	4	37	50
1941 ..	1,253	92	1	98	2	42	45
1942 ..	1,235	87	2	91	2	26	40
1943 ..	1,222	80	1	102	4	31	19
1944 ..	1,199	64	2	98	5	35	21
1945 ..	1,179	77	1	104	5	32	21
1946 ..	1,167	72	1	86	2	32	29
1947 ..	1,159	79	5	90	3	27	26

SANITARY SECTION.

By J. Lawson, M.R.San.I., Chief Sanitary Inspector.

Staff.

J Lawson, M.R.SAN.I	Chief Sanitary Inspector
A. Denman, M.R.SAN.I.	Deputy Chief Sanitary Inspector
Divisional Inspector	1
Sampling Officers	3
Milk and Dairies Inspectors	3
Drainage Inspectors	2
Smoke Inspectors	4
Canal Boat and Rag Flock Inspector	1
Drainage Branch Inspectors	2
Female Inspectors	2
District Inspectors	57
	77
Harold Moore	Senior Clerk
Clerks	28

During the year it has been necessary to concentrate the work of the seriously depleted Inspectorate upon the more pressing of their manifold duties, particularly the large number of complaints received from the public. These totalled more than 16,000, the majority being complaints from tenants of dwelling-houses concerning structural and sanitary defects giving rise, in most cases, to serious nuisance and discomfort to the occupants and necessitating the service of over 5,000 statutory notices. Remedial action in these cases was often protracted by reason of the prevailing shortages of labour and materials and the necessary operation of the licensing arrangements for maintenance and repair work, but tenants on the whole accepted the unavoidable delays with commendable tolerance.

In co-operation with the Housing Department the Sanitary Inspectors verified applications for materials for essential repairs at 2,462 premises in connection with the building materials priority scheme. Other work which has received prior attention was connected with the preventon of the spread of infectious disease; supervision of premises in which the manufacture, preparation, or sale of food is carried on; milk and ice cream supervision; and the prevention of adulteration and misrepresentation of food and drugs.

It is fitting that reference should be made to the retirement, in June, of Mr. I. Priestley, who held the office of Chief Sanitary Inspector for 13 years. Mr. Priestley has long been associated with efforts made to direct attention to the need for new powers to regulate the materials contained in stuffed dolls and other toys, and to secure other desirable amendments of the law relating to Rag Flock. It is noted with particular interest, therefore, that legislation on these lines is foreshadowed by the report of the Inter-departmental Committee on the Rag Flock Acts issued in July, 1946.

The Manchester Corporation Act, 1946, which received the Royal assent on July 26th, 1946, contains important provisions which have been delegated to the Health Department, and reference is made elsewhere in this report to these matters.

Food Supervision.

Adulteration of Food and Drugs.

The functions of the Department relating to the detection and prevention of the adulteration or misrepresentation of food and drugs have been maintained fully during the year, and it is pleasing to note a decrease in food adulteration, particularly in milk, compared with the previous year.

The Public Analyst examined 4,326 samples of food and drugs submitted to him, 2,225 being statutory and 2,098 informal samples, whilst 3 samples were submitted by members of the public. The samples obtained were largely representative of staple articles of diet, but many foods and drugs which are consumed or used infrequently have also received attention.

288 samples, comprising 158 statutory, 129 informal, and 1 private sample, contravened the Acts and Regulations, representing a percentage of 6·66. This constitutes an appreciable decrease from the previous year when 356 samples, equivalent to 9·5 per cent., were adulterated or unsatisfactory.

The decrease in adulteration was most marked in milk. Of 2,339 milk samples, 274—constituting a percentage of 11·86—were reported by the Public Analyst as adulterated or unsatisfactory, compared with 332 samples or 18·37 per cent. in 1945. The adulterations were generally of a minor character and were dealt with by cautioning the persons concerned. In 12 instances legal proceedings were instituted ; eight of these cases were concerned with milk and four with other foods, and penalties and costs totalling £47 2s. 0d. were imposed by the Justices.

Year	Percentage of samples adulterated or unsatisfactory	
	Milk samples	All food and drugs
1942..	12·69	6·65
1943..	12·94	6·24
1944..	10·85	6·13
1945..	18·37	9·50
1946..	11·86	6·66

Composition of Milk Samples analysed in connection with the Sale of Milk Regulations, 1939.

Year	No. of Samples	Average Fatty solids per cent.	Average Non-fatty solids per cent.	Average Total solids per cent.
1946	1,422	3·40	8·76	12·16
1945	1,449	3·45	8·67	12·12
1944	1,534	3·49	8·75	12·24
1943	1,491	3·44	8·78	12·22
1942	1,528	3·48	8·74	12·22
Requirements of the Sale of Milk Regulations, 1939	—	3·00	8·50	11·50

Legal proceedings were instituted in connection with adulterated samples as follows :—

Article	Nature of irregularity	No. of summons	Result of legal proceedings
Milk..	Added water	3	Defendants convicted. Fines imposed totalling £7 0s. 0d.
Milk	Deficient in fat	3	Defendant convicted in 1 case and fined £5. The other 2 cases were dismissed.
Milk	Added water and deficient in fat	2	Defendants convicted and fined £5 in each case.
Vinegar	18·5 per cent. deficient in acetic acid	1	Withdrawn ; summons taken out by retailer against manufacturer who was fined £5.
Brawn	Contained preservatives, sulphur dioxide	1	Defendant convicted and fined £2. Summons also taken out by retailer against manufacturer, who was fined £2.
Sausage	Contained preservatives, sulphur dioxide	2	Defendants convicted. Fines imposed totalling £7 0s. 0d.

Public Health (Preservatives in Food) Regulations, 1925—1927.

All samples governed by the Regulations were examined by the Public Analyst for evidence of preservatives. 5 cases were found to contravene the regulations.

A sample of brawn was found to contain sulphur dioxide. Legal proceedings were instituted against the retailer who was fined £2. The manufacturer was fined £5 on a summons taken out by the retailer.

2 samples of sausage were also found to contain sulphur dioxide and legal proceedings resulted in the defendants being fined in each case. Fines amounting to £7 were imposed.

An informal sample of gravy browning was found to contain sulphurous acid, and an informal sample of coffee and chicory extract contained benzoic acid and was not accordingly labelled.

Proceedings under the Provisions of the Food and Drugs Act, 1938.

Informal Samples		Article	Statutory Samples			Prosecutions				
Obtained	Adulterated		Obtained	Adulterated	Cautioned adulteration slight	Summoned	Fined	Withdrawn or dismissed	Amount of fines	Amount of costs to be paid
									£ s. d.	£ s. d.
1	—	Acid, Boric	—	—	—	—	—	—	—	—
*1	‡1	Apples, Chocolate covered	2	—	—	—	—	—	—	—
—	—	Apples, Toffee	1	—	—	—	—	—	—	—
1	—	Arrowroot	1	—	—	—	—	—	—	—
8	—	Bacon and Ham	45	—	—	—	—	—	—	—
9	—	Baking Powder	8	—	—	—	—	—	—	—
1	—	Barley	18	—	—	—	—	—	—	—
—	—	Borax	2	—	—	—	—	—	—	—
1	—	Borax, Glycerine of	1	—	—	—	—	—	—	—
—	—	Brawn	19	1	—	† 1	1	—	2 0 0	—
13	—	Bread	34	—	—	—	—	—	—	—
7	—	Breakfast Cereals	33	—	—	—	—	—	—	—
*15	—	Butter	40	—	—	—	—	—	—	—
2	—	Cake Decorations and Trimmings	—	—	—	—	—	—	—	—
24	—	Cakes, Sweet	20	—	—	—	—	—	—	—
—	—	Camphor, Compound Tincture of	1	—	—	—	—	—	—	—
3	—	Cascara Extract	2	—	—	—	—	—	—	—
17	—	Cheese	34	—	—	—	—	—	—	—
1	—	Cinnamon, Ground	—	—	—	—	—	—	—	—
1	—	Citric Acid	—	—	—	—	—	—	—	—
16	—	Cocoa	21	—	—	—	—	—	—	—
5	—	Coffee	28	—	—	—	—	—	—	—
19	1	Coffee and Chicory Extract	—	—	—	—	—	—	—	—
1	—	Colouring fluid	—	—	—	—	—	—	—	—
18	—	Cooking fat	2	—	—	—	—	—	—	—
1	—	Cornflour	3	—	—	—	—	—	—	—
1	—	Cough syrup	—	—	—	—	—	—	—	—
3	—	Curry Powder	—	—	—	—	—	—	—	—
9	—	Custard Powder	7	—	—	—	—	—	—	—
1	—	Dusting Powder	—	—	—	—	—	—	—	—
1	—	Easton's Syrup	—	—	—	—	—	—	—	—
18	—	Effervescing Salts	1	—	—	—	—	—	—	—
5	—	Eggs, Dried	9	—	—	—	—	—	—	—
2	—	Epsom Salts	2	—	—	—	—	—	—	—
9	—	Essences, Flavouring	—	—	—	—	—	—	—	—
2	—	Figs, Syrup of	—	—	—	—	—	—	—	—
8	—	Fish in glass jar	—	—	—	—	—	—	—	—
43	—	Fish, Tinned	—	—	—	—	—	—	—	—
21	—	Fish Paste, Prepared	6	—	—	—	—	—	—	—
1	—	Flour	15	—	—	—	—	—	—	—
3	—	Flour, Self-Raising	33	—	—	—	—	—	—	—
8	—	Fruits, Dried	38	—	—	—	—	—	—	—
1	—	Fruit, Tinned	1	—	—	—	—	—	—	—
10	—	Gelatine	4	—	—	—	—	—	—	—
2	—	Ginger, Ground	—	—	—	—	—	—	—	—
5	—	Glauber Salts	—	—	—	—	—	—	—	—
3	—	Glucose	—	—	—	—	—	—	—	—
6	—	Glycerine	1	—	—	—	—	—	—	—
19	2	Gravy Browning	—	—	—	—	—	—	—	—
—	—	Gregory Powder	1	—	—	—	—	—	—	—
*6	—	Herbs, Dried	—	—	—	—	—	—	—	—
1	—	Hips, Syrup of	—	—	—	—	—	—	—	—
2	—	Honey	5	—	—	—	—	—	—	—
2	—	Hypophosphates, Compound Syrup of	—	—	—	—	—	—	—	—
24	—	Ice Cream	—	—	—	—	—	—	—	—
1	—	Iodine, Tincture of	—	—	—	—	—	—	—	—
13	—	Jam	33	—	—	—	—	—	—	—
3	—	Jellies, Table	—	—	—	—	—	—	—	—
3	—	Lanoline	—	—	—	—	—	—	—	—
19	—	Lard	2	—	—	—	—	—	—	—
1	—	Lemon Curd	—	—	—	—	—	—	—	—
—	—	Liquorice, Compound Powder of	1	—	—	—	—	—	—	—
3	—	Lint, Boric	—	—	—	—	—	—	—	—
5	—	Macaroni	9	—	—	—	—	—	—	—
3	—	Magnesia	—	—	—	—	—	—	—	—
6	—	Malt Extract	—	—	—	—	—	—	—	—
15	—	Margarine	48	—	—	—	—	—	—	—
13	—	Meat Extract	—	—	—	—	—	—	—	—
25	—	Meat Paste, Prepared	26	—	—	—	—	—	—	—
20	—	Meat, Tinned	3	—	—	—	—	—	—	—
511	4	Carried forward	560	1	—	1	1	—	2 0 0	—

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* Includes one private sample. † Summons also taken out by defendant against wholesaler who was fined £5.
‡ Referred to Ministry of Food.

Proceedings under the Provisions of the Food and Drugs Act, 1938—continued.

Informal Samples		Article	Statutory Samples			Prosecutions				
Obtained	Adulterated		Obtained	Adulterated	Cautioned adulteration slight	Summoned	Fined	Withdrawn or dismissed	Amount of fines £ s. d.	Amount of costs to be paid £ s. d.
511	4	Brought forward	560	1	—	1	1	—	2 0 0	—
3	—	Medicated Lozenges	4	—	—	—	—	—	—	—
19	—	Medicated Tablets	5	—	—	—	—	—	—	—
16	—	Medicines, Patent	—	—	—	—	—	—	—	—
1128	121	Milk	1211	153	145	8	6	2	22 0 0	14 0 0
27	—	Milk, Condensed	—	—	—	—	—	—	—	—
24	1	Milk, Dried	3	—	—	—	—	—	—	—
3	—	Mincemeat	1	—	—	—	—	—	—	—
10	—	Mustard	7	—	—	—	—	—	—	—
3	—	Oatmeal	21	—	—	—	—	—	—	—
—	—	Oil, Camphorated	1	—	—	—	—	—	—	—
5	—	Oil, Castor	1	—	—	—	—	—	—	—
1	—	Oil, Cod Liver	3	—	—	—	—	—	—	—
—	—	Oil, Eucalyptus	1	—	—	—	—	—	—	—
1	—	Oil, Olive	—	—	—	—	—	—	—	—
6	—	Oil, Paraffin	3	—	—	—	—	—	—	—
1	—	Ointment, Eucalyptus	—	—	—	—	—	—	—	—
2	—	Ointment, Sulphur	—	—	—	—	—	—	—	—
4	—	Ointment, Zinc	—	—	—	—	—	—	—	—
1	—	Orange, Syrup of	—	—	—	—	—	—	—	—
—	—	Parrish's Food	3	—	—	—	—	—	—	—
—	—	Peas and Beans	18	—	—	—	—	—	—	—
5	—	Pepper	—	—	—	—	—	—	—	—
21	—	Pickles	13	—	—	—	—	—	—	—
2	—	Pills	1	—	—	—	—	—	—	—
2	—	Preservative Paste	—	—	—	—	—	—	—	—
7	—	Pudding Mixture	4	—	—	—	—	—	—	—
15	—	Puddings	—	—	—	—	—	—	—	—
4	—	Pudding, Tinned	—	—	—	—	—	—	—	—
3	—	Rennet	—	—	—	—	—	—	—	—
—	—	Ryemeal	1	—	—	—	—	—	—	—
3	—	Saccharin Tablets	—	—	—	—	—	—	—	—
17	—	Salt	—	—	—	—	—	—	—	—
32	—	Sauces	—	—	—	—	—	—	—	—
6	—	Sausages	38	2	—	2	2	—	7 0 0	—
3	—	Semolina	24	—	—	—	—	—	—	—
1	—	Senna, Confection of	—	—	—	—	—	—	—	—
5	—	Soda, Bicarbonate of	—	—	—	—	—	—	—	—
5	—	Soup, Dried	—	—	—	—	—	—	—	—
21	2	Soup, Tinned	—	—	—	—	—	—	—	—
—	—	Soya Flour	2	—	—	—	—	—	—	—
—	—	Soyghetti	4	—	—	—	—	—	—	—
7	1	Spices, Ground	1	—	—	—	—	—	—	—
—	—	Squills, Syrup of	3	1	1	—	—	—	—	—
19	—	Stuffings, Dried	—	—	—	—	—	—	—	—
5	—	Suet	9	—	—	—	—	—	—	—
—	—	Sulphur, Flowers of	1	—	—	—	—	—	—	—
15	—	Sugar	60	—	—	—	—	—	—	—
4	—	Sweets	28	—	—	—	—	—	—	—
—	—	Tea	37	—	—	—	—	—	—	—
—	—	Thymol, Compound Glycerine of	3	—	—	—	—	—	—	—
10	1	Treacle and Syrup	—	—	—	—	—	—	—	—
—	—	Tripe	9	—	—	—	—	—	—	—
44	—	Vegetables, Tinned	1	—	—	—	—	—	—	—
17	—	Vegetables and Meat, Tinned	—	—	—	—	—	—	—	—
22	—	Vinegar	42	1	—	1	—	†1	—	2 2 0
4	—	Yeast Extract	—	—	—	—	—	—	—	—
1	—	Apple Juice	—	—	—	—	—	—	—	—
13	—	Beer	10	—	—	—	—	—	—	—
—	—	Brandy	2	—	—	—	—	—	—	—
—	—	Cordials	29	—	—	—	—	—	—	—
—	—	Gin	2	—	—	—	—	—	—	—
—	—	Rum	8	—	—	—	—	—	—	—
1	—	Tonic, Cocktail	—	—	—	—	—	—	—	—
20	—	Waters, Aerated	22	—	—	—	—	—	—	—
—	—	Whiskey	6	—	—	—	—	—	—	—
2	—	Wines	23	—	—	—	—	—	—	—
2101	130		2225	158	146	12	9	3	31 0 0	16 2 0

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† Summons also taken out by defendant against wholesaler who was fined £5.

Public Health (Condensed Milk) Regulations, 1923—1927.
Public Health (Dried Milk) Regulations, 1923—1927.

Samples of condensed milk examined	27
Samples of dried milk examined	27

One informal sample of dried milk was 14·4 per cent. deficient in fat. Repeat samples taken were found to conform to the regulations.

Artificial Cream—Section 28, Food and Drugs Act, 1938.

Registered premises	2
Visits to registered premises	2

The Synthetic Cream (Restriction) Order, 1940, made by the Minister of Food came into force on 9th December, 1940, and prohibited the manufacture of artificial cream.

Registration of Factories and Wholesale Premises.
Section 34, Food and Drugs Act, 1938.

(*a*) Margarine factories on register	1
(*b*) Wholesale dealers in margarine on register	99
(*c*) Butter factories on register	2
Visits to registered premises	101

Milk Control Section.

The control of milk in Manchester during 1946 has been influenced to a great extent by the rationing control of the Ministry of Food and, consequently, the work of this section has been mainly directed to an improvement in the quality and grading of milk, in the licensing of dairy premises and in milk processing plants.

There has been some improvement in labour conditions in the larger dairies, due largely to the return from the Forces of experienced men to their old posts. Delivery and installation of new dairy plant and equipment have been effected in several instances.

The amount of milk consumed daily in the City has been estimated at 95,000 to 100,000 gallons. It is further estimated that 98 per cent. of this milk is subjected to the process of pasteurisation or other means of heat-treatment prior to delivery to the consumer. Special supervision of plants for heat-treatment is maintained by the Milk Control Inspectors and samples are taken regularly and submitted for examination by the phosphatase test, which is a very sensitive index of whether milk has been processed according to the Regulations (see Table V.). Whenever an adverse result is obtained in a sample of pasteurised milk, the plant is re-inspected and, if the cause is not readily apparent, a series of samples of milk (*i.e.*, a ' run through ') is taken at different stages of treatment and a study of these usually indicates where flaws in the processing of the milk have occurred.

No epidemic of infectious disease definitely attributable to milk has arisen during the year.

City Farms.

There has been a reduction in the number of farms with milch herds in the City from 45 to 36. This number will probably be still further reduced in the near future, due to the development of land for housing purposes. Included in these 36 farms is 1 producing Tuberculin Tested milk and 8 producing Accredited milk.

Bulk sampling of the milk (particularly at milking times) from each farm has been carried out, in addition to periodical examination of the cattle by the Veterinary Inspectors of the Ministry of Agriculture and Fisheries and, as a result, 8 cows suffering from tuberculosis of the udder were discovered and slaughtered under the Tuberculosis Order, 1938. The conditions of production at these farms have been supervised by examining samples of the milk for cleanliness. In the case of the unsatisfactory results the farms were visited at milking times and advice given in the methods of clean milk production.

Country Farms.

The examination of milk supplied to the City from farms situated outside the boundary was carried out as in previous years. Bulk samples from 191 such farms were examined by the biological test for tubercle bacilli and 15 proved positive, giving an incidence rate of 7·85 per cent. The greater part of this milk, however, is subjected to the process of pasteurisation or other means of heat-treatment after its arrival at the City dairies, so that any tubercle bacilli which might be present in the milk are killed before such milk is consumed by the public (see Table VI.).

Although 32 samples of graded milk examined bacteriologically were fairly satisfactory, 59 samples of the raw ungraded milk showed only slight improvement on previous years, 26 of the samples, or 44·1 per cent., being unsatisfactory, thus showing that considerable improvement is still called for in the production of milk on country farms. In each case, particulars of the examination results were forwarded to the Medical Officer of Health of the area producing the milk.

City Dairies and Milk Shops, etc.

The inspectors have paid over 4,000 visits to farm premises, dairies, and milk shops during the year. Generally speaking, the standard of cleanliness has been maintained at a high level.

Legal proceedings were instituted in respect of three contraventions of the Milk and Dairies Acts and Orders—one against a dairyman for allowing a dirty vehicle to be used and two against roundsmen for filling milk bottles in the street. A conviction was obtained in each case.

The inspection and checking of the plants at the 12 licensed pasteurising establishments in the city have been carried out at least once monthly, in addition to routine visits.

Milk Supply to Municipal Hospitals.

Pasteurised milk supplied to the Corporation hospitals has been strictly supervised and the results have been entirely satisfactory. Regular sampling has shown the milk to be extremely good bacteriologically and to comply with the legal standard. There has been no instance of tuberculous infection.

Samples of the raw milk supplied to Booth Hall Hospital from Langho Colony Farms and samples from the Abergele Farm have been examined frequently and, on the whole, found to be satisfactory, especially the milk from the latter farm, which left nothing to be desired. In no case has there been tuberculous infection.

Heat-treated Milk.

The sampling of heat-treated and pasteurised milk in course of distribution has been carried out by the Milk Control inspectors on behalf of the Ministry of Food. Of 480 samples taken, 382, or 79·8 per cent., satisfied the prescribed tests, viz.—the Phosphatase Test and the ½-hour Methylene Blue Test.

From September, all milk for school children was distributed in schools free of charge, each child being allowed a one-third pint bottle daily.

Ice Cream.

There are 180 premises registered for the manufacture of ice cream and 606 premises registered for the sale of ice cream within the City.

By far the greater proportion of retail sale is carried on from shops and in the streets, where, in practically every case, ice cream is sold loose in the form of cornets or wafers. A very small amount of the ice cream sold in the City is wrapped or pre-packed (one firm of manufacturers wrap a portion of their product, principally for sale in cinemas and theatres). There was an increase in the development of the ice cream bar, where conditions for the sale are more satisfactory, the premises being specially adapted for the purpose.

The most unsatisfactory feature of the distribution of unwrapped ice cream is the sale from carts and barrows in the streets, as it is here that contamination of the product is most likely to occur. From this aspect, pre-wrapping is an essential precaution.

Regular visits of inspection have been made to ice cream premises and the general standard of cleanliness has been good. In no case was it found necessary to institute legal proceedings in respect of dirty premises or equipment, etc., although a number of warnings were required.

At the request of the Parks and Cemeteries Department, Sunday visits were paid to the City parks during the summer months and samples of ice cream were taken from ice cream vendors and submitted for bacteriological examination and chemical analysis. The results were, on the whole, far from satisfactory and, although nothing could be done as regards the composition and ingredients of the ice cream on account of the use of milk, etc., being restricted, where the ice cream was found to be bacteriologically unsatisfactory this was followed up to the source of manufacture and improvements effected. Until the national food position is such as to permit the essential ingredients being allocated to ice cream manufacturers and legal standards of purity and fat content become operative, little improvement can be effected in the existing low food value and bacterial content of ice cream.

The draft regulations made by the Ministry of Health in October concerning heat-treatment and rapid cooling of ice cream (with the exception of ice cream made from a complete 'cold mix' powder) are intended to operate from 1st May, 1947.*

It is satisfactory to note that there have been no cases of infection reported to the Department during the year which could be traced to ice cream consumption.

A considerable quantity of milk sent into the City in bulk from large creameries outside was found on arrival to be of poor quality, with resultant numerous complaints of premature souring being received from the public.

Table I.

Particulars of Milk Samples examined for Tubercle Bacilli.

	Samples taken	Found to contain Tubercle Bacilli
Collected by Milk Control Inspectors at :—		
(*a*) Hospitals	69	—
(*b*) Dairies	192	22*
(*c*) Vehicles	236	15†
(*d*) City Farms	63	7
(*e*) Schools	10	—
Samples submitted from :—		
(*f*) Abergele Farm	11	—
(*g*) Langho Colony Farms	7	—
	588	44

* Bulked mixed farmers' and depot milk taken at pasteurising establishments prior to its being pasteurised.

† Individual farmers' milk prior to its being pasteurised.

Table II.

Analysis of Farms Tested for Tuberculous Milk.

County	No. of Farmers represented by samples of milk	No. of farmers sending tuberculous milk	Percentage
Cheshire	116	10	8·61
Lancashire	35	7	20·00
Derbyshire	62	4	6·45
Staffordshire	11	1	9·09
Montgomeryshire	1	—	—
Total	225	22	9·77

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* The Minister of Health has since made (2nd April, 1947) The Ice Cream (Heat Treatment, etc.) Regulations, 1947, which came into operation on 1st May, 1947, with the exception of Regulation 3(b) (iv).

Table III.

Tuberculous Infection in Raw Milk (Individual Farmers).

YEAR	Number of farmers represented by samples of milk	Number of farmers sending tuberculous milk	Percentage	Percentage of farmers from EACH COUNTY whose milk contained tubercle bacilli			
				Cheshire	Lancashire	Derbyshire	Staffordshire
Total for 46 years (1901—1946)	24,264	2,647	10·91				
1944	655	42	6·41	6·90	14·56	7·50	1·15
1945	350	25	7·14	6·52	25·00	6·97	18·18
1946	225	22	9·77	8·61	20·00	6·45	9·9

Table IV.

Raw Untreated and Heat-Treated Milks (Tuberculosis Rate).

	Raw Untreated Milks		Heat-Treated Milks		Total
	Tuberculin Tested	Accredited and Ungraded	Pasteurised	Heat Treated other than Pasteurised	
Samples taken.. ..	36	326	205	21	588
Found to contain tubercle bacilli ..	—	44*	—	—	44*
Percentage	—	13·5%	—	—	7·5%

* Included in this figure are 22 samples of bulked mixed farmers' and depot milk and 15 samples of individual farmers' milk taken either at or on arrival at pasteurising establishments prior to its being pastuerised. The remaining 7 samples represent individual farmers' raw untreated milk and retailed as such.

Table. V.

Particulars of Raw Untreated and Heat-Treated Milk Samples examined for Bacterial Content, B.Coli., etc.

	No. of samples examined	Satisfactory		Unsatisfactory	
		No.	Percentage	No.	Percentage
Collected by Milk Control Inspectors at Hospitals, Dairies, City Farms, Schools, in course of distribution, etc., and examined for :—					
(*a*) Bacterial Content	463	359	77·5	104	22·5
(*b*) Presence of Bacterium Coli	552	379	68·6	173	31·4
(*c*) Phosphatase Test	572	509	88·9	63	11·1
(*d*) ½-hour Methylene Blue Test	582	512	89·7	70	10·3
(*e*) Full Methylene Blue Test	68	56	82·4	12	17·6
(*f*) Chemical Analysis	61	61	100·0	—	—

140 empty washed milk bottles were also examined for bacterial content, B.coli, and milk souring organisms. 94 or 67·1 per cent. were satisfactory.

Table VI.

Effect of Pasteurisation on Raw Milk.

	No. of samples taken	Bacterial Count and B.Coli				Tubercle bacilli found in	
		Satisfactory		Unsatisfactory			
		No.	Percentage	No.	Percentage	No.	Percentage
Raw mixed farmers' milk from tipping tank	33	4	12·1	29	87·9	22	66·7
Same milk after pasteurisation ..	33	28	84·8	5	15·2	Nil	Nil

Registerable Food Preparation Premises.

A total of 460 premises were on the register at the end of the year under the provisions of Sections 13/14 of the Food and Drugs Act, 1938, relating to premises in which the preparation of sausages or potted, pressed, pickled, or preserved food is carried on.

The premises range from butchers' shops in which sausages are made to factories where food preparation is conducted on a large scale.

The following types of food are prepared in the premises registered :—

Sausages, potted meat, brawn, roast or boiled ham, pressed, pickled, cooked, etc., beef and tongue, roast pork, bacon, boiled shell fish, fish pastes, pickled fish, and pickled onions.

During the year 293 inspections were made and the conditions found, on the whole, were satisfactory, but in several cases in which minor infringements were noted informal action was sufficient to secure subsequent compliance with the requirements of the Act without recourse to legal proceedings.

4 applications for registration of premises were received and in these cases, as with the 4 cases outstanding from 1945, the premises were registered after the necessary structural and other requirements of Sections 13/14 of the Act had been fulfilled.

Food preparation was discontinued at two premises which were deleted from the register, whilst at two other premises changes of occupiers occurred and new certificates of registration were issued.

In consequence of the continued shortage of labour, materials, and equipment, to which reference is made earlier in this report, it has been found necessary to defer registration of premises in many cases in which the provisions of Sections 13/14 are applicable. The premises are supervised, however, to ensure compliance with the requirements of the Act concerning cleanliness of premises and equipment.

Section 14 is also applicable to premises used for the sale, manufacture, or storage of ice cream, and reference is made under the heading " Milk Control " to such premises.

Restaurant, Hotel, Cafe, Canteen, and Kitchens.

Supervision of the above types of catering establishments has been exercised during the year, more particularly in the central areas of the City where the larger premises are situate.

Pressure of business, shortage of trained kitchen staff, and the difficulty of replacing defective or obsolete equipment have militated against the maintenance of a desirable hygienic standard, but it is noted that proprietors are responding increasingly to suggestions made by the Inspectorate towards the attainment of a higher standard of cleanliness in the preparation and handling of food.

Structural improvements to kitchens are limited by the building licence system arising from the national shortage of materials and labour. Essential requirements under the Food and Drugs Act and Shops Act have enabled licences to be obtained for urgent works of replacements and repairs, etc., but the completion of such work was invariably protracted owing to shortages and it was necessary to improvise, utilising alternative materials to secure reasonable compliance with statutory requirements.

Particular attention has been given to the cleansing of crockery, utensils, and cutlery. In many catering establishments washing-up is carried out in a sink in which insufficient hot water is used, rinsing is inadequate, and the subsequent " drying " by towels in short supply is often unsatisfactory. Improvements have been effected in many cases by informal action, but there is still room for much improvement in this direction.

In the larger establishments the installation of modern dish-washing machines is clearly desirable and several of these appliances have been installed during the year, and it is probable that additional installations may be anticipated as the hygienic and labour-saving considerations are more widely appreciated.

Having regard to the importance of personal hygiene in relation to the possible contamination of food and consequent risk to health the visits of the Inspectorate have been supplemented by communications sent by the Medical Officer of Health to approximately 1,500 proprietors of food establishments, including ice cream manufacturers, for circulation to employees handling food for sale. In each case display cards were issued stressing the necessity for food handlers to wash their hands after using a watercloset.

Bakehouses.

Inspections of this type of food preparation premises numbered 497 and in 9 instances inspection revealed unsatisfactory conditions as to cleanliness and the occupiers were cautioned by the inspectors who found upon the re-inspection that the undesirable conditions had been rectified. In two cases sanitary defects were revealed and subsequently remedied informally.

Plans of 1 new bakehouse and structural alterations to 7 others were submitted by the City Architect to the Medical Officer of Health for recommendation as to conformity with Section 13 of the Food and Drugs Act, 1938, and other statutory requirements administered by the Health Department.

At the end of the year 511 bakehouses were on the register.

Dwelling-house Inspection.

The inspection of dwelling-houses constituted a major activity in the work of the District Inspectors, who made 17,588 inspections and 33,436 re-inspections of houses, mainly in consequence of complaints concerning general disrepair or drainage and other sanitary defects. The heavy incidence of complaints relating to disrepair of dwelling-houses is largely a reflection of the general deterioration of property aggravated by the suspension of normal maintenance work in the war period and the difficult post-war position as to the availability of labour and materials for repair purposes.

A large number of complaints was received from tenants of houses situated in potential clearance areas as a result of the operation of the Postponement of Works Order, 1939, relating to the suspension of clearance procedure. A great many of these worn-out houses thus obtained an extended lease of life but the execution of urgent repairs, particularly to roofs, presents serious practical and other difficulties, as in many cases stripping and re-slating constitutes the only effective method of securing lasting weather-tightness. It will be appreciated that owners are reluctant to incur uneconomic expenditure upon the maintenance of this class of property and serious nuisance and discomfort to tenants often arises as a result.

Whilst it has not been possible under existing circumstances to require that all items of disrepair be remedied, the action taken by the Department was such as to ensure that houses are made weathertight and as reasonably fit for habitation in other respects as present circumstances permit. The principal types of disrepair reported were leaking roof and gutters, bulged ceilings, defective window frames, penetrating and rising dampness, defective waterclosets and drainage systems.

Following the service of preliminary notices it was necessary to serve statutory notices respecting 5,709 houses and to institute summary proceedings in 60 cases concerning non-compliance with notices served on owners to remedy leaking roofs and other structural defects. In addition, the drainage branch of the Department carried out work in default at 398 premises and on owners' requests at 273 premises, mainly concerning defective drainage and sanitary appliances, including the repair and renewal of eavesgutters and rainwater pipes. Other work executed by the drainage branch related to the repair and maintenance of public sewers in connection with 780 premises under the provisions of Section 23/24 Public Health Act, 1936, the cost of the work being recoverable from the owners of the premises involved.

The operation of the provisions of Section 33 of the Manchester Corporation Act, 1946, has facilitated the action taken under Section 24 of the Public Health Act, 1936, in cases in which immediate action is considered necessary to deal with choked sewers. Under the new powers it is no longer necessary for the local authority to determine that immediate action be taken in these cases as this decision may now be made by the Medical Officer of Health or a Sanitary Inspector. A similar provision is contained in Section 34 of the Manchester Corporation Act, 1946, respecting the examination of drains believed to be defective.

Rent Restrictions Acts, 1920-1939.

Applications were received from 84 tenants for certificates of disrepair and in 79 cases certificates were granted after inspections had revealed that the houses concerned were not in a reasonable state of repair. In 5 instances the defects which gave rise to the applications were remedied before the cases were considered by the Health Committee and certificates were not issued in consequence.

It was found that most of the owners concerned in the 79 cases in which certificates were issued, executed the necessary repairs within a relatively short period following the issue of certificates. In many instances, however, it was necessary to serve statutory notices under the Public Health Act to secure remedial action.

9 applications were received from owners for reports under Section 5 of the Act of 1923 after the houses concerned had been placed in a reasonable state of repair. In 8 cases reports were issued as a result of the completion of the necessary repairs. The report was withheld in the remaining case as the repairs had not been completed.

The small number of applications for certificates of disrepair is somewhat surprising in view of the dilapidation of so many dwelling-houses in the City, and at first sight would suggest that tenants are prepared to tolerate substandard conditions in their homes. It is probable, however, that generally they prefer to rely for redress upon complaints to the Health Department, of which there is no dearth, to achieve the desired end, rather than to incur the possibility of strained relations with the rent collector when the permitted percentage of rent is withheld under the Rent Restrictions Acts.

Houses Let-in-Lodgings.

During the year, 1,774 inspections were made in connection with the byelaws relating to houses in which rooms are sub-let to families of the working class.

Infringements of the byelaws were found in 106 cases, 67 of which were remedied by informal action. In 39 cases relating to failure to cleanse the internal surfaces of walls and ceilings at periodical intervals notices were served in accordance with the requirements of the byelaws; the necessary work was completed subsequently. The prevailing shortages of labour and materials have given rise to considerable difficulty in securing full compliance with the byelaw relating to periodical cleansing which, in some cases, entails redecorating the house throughout, and it has been necessary to relax to some extent the standards applicable in normal times.

The number of houses registered is 922, including 348 'farmed' houses. Notification to the Corporation is compulsory under the byelaws and it is probable that a systematic survey would reveal that many houses subject to registration and byelaw control have not been notified as being let-in-lodgings and when the Inspectorial position permits it is hoped to bring under supervision all premises subject to the byelaws, in view of the need to ensure a reasonable degree of amenity and hygiene to the many families who are compelled by the housing shortage to reside in houses originally designed for use by one family only.

Reference was made in the report of 1945 to the desirability of obtaining additional powers to control 'farmed' houses by requiring the approval of the Corporation before a house is 'farmed.' It was not found possible, however, to have the provisions incorporated in the Manchester Corporation Act, 1946.

Common Lodging Houses.

At the end of the year there were 17 common lodging houses in the City with accommodation as follows :—

Type	Premises	Registered accommodation
Males..	15	2,173
Females	2	230
Total	17	2,403

One common lodging house for males was closed during the year.

Owing to unsatisfactory conditions of cleanliness at another common lodging house for males, the registration was renewed for a period of three months only. At the end of that period, the standard of cleanliness having considerably improved, the registration was renewed for a further period of twelve months.

383 inspections were made during the year.

Dirty conditions were remedied after caution in 4 instances.

The comments as to cleanliness of internal surfaces (walls and ceilings, etc.) at houses let-in-lodgings are applicable also to common lodging houses.

Reference was made in the report of 1945 to the resolution of the Sanitary Sub-Committee on December 7th of that year that the necessary steps be taken to secure up-to-date byelaws to regulate the common lodging houses in the City. The Ministry of Health, however, is unwilling to agree to making such byelaws unless such of the requirements as depend on the availability of materials, supplies, and labour were omitted, *e.g.*, house-washing at stated times, provision of adequate supplies of towels, structural repairs, and provision of sufficient bedding, etc. As the position in this respect has not improved, further representations to the Minister have been deferred for the time being.

Caravan Dwellings.

The City is relatively immune from the vexatious problems associated with the mass development of caravan sites and which beset the officers in more salubrious areas.

The records show that at the end of the year there were 15 sites on which 123 caravan dwellings were located within the City boundary. 76 inspections were made under the provisions of the Public Health Act relating to the prevention of nuisances, filthy and verminous premises, and the prevention of the spread of infectious diseases.

Complaints were received concerning a site in a southern suburb which had developed rapidly from sporadic use by a few van dwellers, mainly of the nomad type, into a congested area of caravan habitations for approximately 100 people of all ages. Essential facilities were lacking and the only sanitary accommodation consisted of one watercloset, which soon became choked and defective, and there was evidence of fouling of surfaces in the vicinity. Unauthorised use was made of sanitary accommodation at nearby factory premises. In the circumstances the Town Clerk communicated with the owners of the land, who took action which resulted in the removal of the caravans and the cleaning up of the site.

Powers relating to the licensing of the setting up of temporary structures under a local Act are delegated by the City Council to the Town Planning and Buildings Committee and 17 reports were sent during the year to the City Architect respecting caravans and similar structures which had been reported by the District Sanitary Inspectors.

Canal Boats.

Supervision of canal boats used for the conveyance of goods and which are used as dwellings was maintained in accordance with the provisions of the Public Health Act, 1936, and the regulations made in 1878 under the Canal Boats Act of 1877.

Reference was made in the annual report last year to the existing regulations being out of date and to the need for new regulations designed to promote more hygienic conditions of the dwelling accommodation for persons living in the boats. Stress was laid upon the desirability of the prohibition of the use of canal boats as homes for women and children.

It may be noted in this connection that the Manchester canal carrying companies do not permit the use of their canal boats by women and children.

The "narrow" type of boats—usually plying on long distance traffic from the Midlands—were found generally to have women and children on board during the year, but there has been an appreciable reduction of the number since the termination of the heavy traffic in war materials and foodstuffs which took place during the war years.

There were 190 canal boats registered as dwellings at the end of the year, 9 of the boats being propelled by oil motor, the remainder being horse-drawn. The canals used by these and similar boats within the city area are 11½ miles in length.

1,215 inspections were made and, on the whole, satisfactory conditions were found, the number of infringements reported being 42. In 34 instances these related to disrepair, or dirty conditions, in 1 case overcrowding was noted and in another the ventilation was unsatisfactory, the remainder being minor breaches of the regulations. Notices were served in respect of 19 infringements and in the remaining 23 cases the masters were cautioned mainly regarding unsatisfactory conditions of cleanliness.

Subsequent inspection disclosed that the unsatisfactory conditions had been remedied in the majority of cases and appropriate action is being taken to secure full compliance with the requirements of the regulations in the remaining cases. No case of infectious disease was reported.

Arrangements exist whereby welfare services are made available to women and children living in canal boats which reach the canals within the city area. Health visitors visit the mooring places and advise mothers as to the services open to them and to their children.

Water Supply.

The Manchester city water supply is obtained from impounding reservoirs in the Lake District and the Longdendale Valley, the latter source being situate in the Pennine Range and approximately 18 miles distant from the City.

Water from these sources is supplied to all the dwelling-houses in the City with the exception of 2 isolated cottages in North Manchester, supplied with satisfactory water from a spring, and 9 houses in the Wythenshawe district, supplied from 7 wells, 2 of which are considered to be satisfactory. In the remaining cases the tenants have been advised to boil all water used for drinking purposes. The premises concerned are too far distant from the City's mains to make the provision of municipal water practicable.

Certain wells have been closed as a result of the housing and other development of the Wythenshawe area.

Samples of water are taken systematically from domestic and other premises throughout the City as a routine measure, and upon receipt of complaints, which usually arise from local temporary discolouration of supplies. 53 samples were taken for bacteriological and chemical examination and upon analysis were found to be satisfactory. The results were communicated to the Waterworks Department, who forwarded to the Medical Officer of Health similar information as to the results of samples taken by that department of the City water supply, including reports on the two sources of supply and the outlets of the storage reservoirs.

46 reports made by the District Sanitary Inspectors regarding insufficient water supply or inadequate pressure were referred to the Waterworks Department for attention.

Complaints received regarding local water supplies having a chlorine taste were investigated and it was ascertained that a slight excess of chlorine dosage had been employed as a temporary precautionary measure. The conditions which gave rise to the complaint were rectified after a short interval.

The following information has been furnished by the Engineer and Manager of the Waterworks Department of the Corporation :—

"The water supply has been satisfactory both in quality and quantity.

Regular samples are taken for bacteriological examination of the raw water and of the treated water going into supply. Out of the 3,094 samples of water going into supply examined in 1946, 356 were found to be free from coliform bacteria. Typical chemical analyses of the source of supply are given herewith:—

TYPICAL ANALYSES OF WATER FROM THIRLMERE AND HAWESWATER LAKES.

January to December, 1946.

These waters are subject only to slight variations and the following analyses are typical :—

	Thirlmere	*Haweswater*
*p*H value	6·75	7·05
Colour p.p.m. platinum	13	11
Turbidity p.p.m. silica scale	0.8	2·8
	Parts per million	
Total solids dried at 180°	28·8	29·6
Free acidity as CO_2	2·0	2·0
Alkalinity as $CaCO_3$	6·0	11·6
Total hardness as $CaCO_3$	14	20
Chlorides as Cl_2	7·5	7·5
Nitrates as N_2	0·12	0·16
Free and saline ammonia NH_3	0·008	0·014
Albuminoid ammonia, NH_3	0·048	0·064
Oxygen absorbed test, 4 hours at 27°C.	1·16	0·76
Silica as SiO_2	2·5	2·0
Iron as Fe	0·06	0·12
Manganese as Mn	Nil	0·06

LONGDENDALE AQUEDUCT—RAW WATER.

January to December, 1946.

This water is subject to wide fluctuations in character. The following data gives an indication of these fluctuations :—

*p*H value	4·5	to	6·0
Colour p.p.m. platinum	28	to	120
Turbidity p.p.m. silica scale	8	to	40
	Parts per million		
Total solids dried at 180°C.	around 64·0		
Free acidity as CO_2	3·0	to	10·0
Alkalinity as $CaCO_3$	2·0	to	5·0
Total hardness as $CaCO_3$	around 36		
Chlorides as Cl_2	11·0		13·0
Nitrates as N_2	0·24		0·56
Free and saline ammonia NH_3	around 0·060		
Albuminoid ammonia NH_3	0·052		0·132
Oxygen absorbed test, 4 hours at 27°C.	1·37		3·35
Silica as SiO_2	8·0		9·0
Iron as Fe	0·22		0·90
Manganese as Mn	0·11		0·22

The Thirlmere and Longdendale supplies are treated with hydrated lime. This has proved effective in limiting the maximum lead content found in samples given overnight contact with lead service pipes to about 0·2 part per million.

It has proved impracticable to prevent access of seagulls to the larger service reservoirs. Pollution from this source is dealt with by chlorination at the outlets of the reservoirs."

Infectious Disease.

The District Sanitary Inspectors investigated 1,528 cases of infectious disease, other than tuberculosis, and supervised the subsequent disinfections. Inspections and other visits to the homes of persons suffering from tuberculosis numbered 1,556.

Tracing of contacts is an important part of the Inspectors' work connected with the prevention of the spread of infectious disease. 3,871 visits were made for this reason, including 3,687 visits to smallpox contacts. The latter visits were made mainly in connection with the occurrence of a fatal case of smallpox in the City and to which reference is made elsewhere in this report. Other smallpox contacts which were visited had been notified to the Medical Officer of Health as having arrived in this country on ships in which smallpox had developed during the voyage.

Smoke Abatement.

Systematic observations of industrial chimneys have been continued to secure the abatement of smoke nuisances in accordance with the provisions of the Public Health Act, 1936, and to minimise industrial smoke emission generally. The prevailing fuel shortage and the labour position have created conditions unfavourable to the reduction of smoke emission and chimneys with a previous clean record have contributed in varying degrees to the pollution of the atmosphere. Investigation revealed that in many instances the causes were beyond the control of the management concerned.

The national fuel emergency has necessitated the use of inferior or unfamiliar fuels, and in some cases it was found necessary to dismantle mechanical stokers and resort to hand firing as the only practicable means of utilising the fuel available.

The national labour position is reflected in the delay experienced in obtaining replacement of mechanical equipment to boiler installations giving rise to serious difficulty in the maintenance and supervision of plant. The shortage of skilled firemen appears to be even more pronounced than during the war years, and this position merits serious attention from the fuel economy angle, no less than the smoke abatement aspect.

There can be little doubt that lack of knowledge of the principles of combustion and the efficient management of boiler plant by furnace operators give rise to appreciable wastage of precious fuel and to avoidable emission of smoke.

Reference is made elsewhere in the report of the Medical Officer of Health to the resumption of training courses in the area for firemen and others concerned in boiler house practice and management.

The activities of the smoke inspectors have been directed increasingly to preventive measures rather than repressive action. In many instances repairs and improvements to plant have been effected after consultation with industrialists. The inspectors have also advised firemen as to suitable methods to obtain the maximum efficiency and reduced smoke emission with the types of fuel available. In cases in which smoke nuisance was due solely to the fuel supply being unsatisfactory, communications were sent to the Ministry of Fuel and Power with a view to an improvement being effected.

It was necessary to institute magisterial proceedings in a number of cases in which smoke nuisance was due to negligent firing. Particulars of such action are summarised below :—

Timed observations taken	508
Revealing black smoke 2 minutes and over in half-hour periods	48
Revealing smoke other than black and causing nuisance	3
Revealing black smoke under 2 minutes	141
Not revealing black smoke	298
Total amount of black smoke observed in minutes	555·5
Average amount of black smoke observed (in minutes) per observation revealing black smoke	2·6
Complaints received from all sources	48
Visits to works *re* smoke abatement	531
Premises where Inspector recommended plant to be altered, improved, or repaired	16
Premises where plant was found to have been repaired as a result of Inspector's recommendation	11
Cases reported to Committee	51
Cases cautioned or excused	31
Statutory notices served	16
Magistrates' order to abate nuisances obtained	1
Prosecutions for smoke nuisances and penalties imposed	3
Total amount of penalties and costs	£2 18s. 0d.
Statutory notices expiring without further action	19
Approximate number of industrial chimneys in the City	1,373

Causes to which smoke emissions are attributed.

Of the 51 cases reported to the Committee where chimneys emitted smoke for two minutes or over in the half-hour period, the nuisance was found to be due to the undermentioned causes :—

Bad firing	25
Bad firing and unsuitable fuel	9
Unsuitable fuel	12
Structural defects in plant	3
Bad firing and defects in plant	2

Manchester Corporation Act, 1946—*Smoke Abatement Clauses.*

The above measure received the Royal Assent in the latter half of the year and contained important, and indeed historic, provisions concerned with the creation of smokeless areas in the City and with the prevention of smoke from newly installed industrial furnaces.

Smokeless Areas.

In considering the date of operation of the powers to create the first smokeless area in the City, it was necessary to have regard to the existing serious shortage of fuel, including smokeless types, and to the difficulty of converting unsuitable grates and appliances to gas, electricity, or other smokeless operation and to the additional load which would be imposed upon the supply undertakings at a critical period.

It was considered further that premature action to implement the new powers of the Corporation may well have aroused prejudice against the measure, the ultimate success of which depends to an appreciable extent upon the co-operation and goodwill of occupiers of premises in the area concerned. The Health Committee accordingly deferred a decision as to the date of operation of this section of the Act until the position regarding the production and availability of smokeless fuels and appliances is more favourable.

Prevention of Smoke from Industrial Furnaces.

Section 36 of the 1946 Act is now in operation in the City and in view of the importance of the provisions, the whole section is reproduced below :—

> (1) No person shall install in any building whether erected before or after the passing of this Act any furnace for steam raising or for any manufacturing or trade purpose unless such furnace is so far as practicable capable of being operated continuously without emitting smoke.
>
> (2) Any person who contravenes the provisions of this section shall be liable to a penalty not exceeding ten pounds and to a daily penalty not exceeding two pounds.
>
> (3) If a person before installing in a building a furnace to which this section applies submits to the Corporation plans proposals and particulars of the proposed furnace and furnishes them with such other necessary information in regard thereto as they may require the Corporation shall within a period of six weeks from the date upon which such plans proposals particulars and information are received by them serve a notice upon such person stating whether or not they are satisfied that the furnace is so far as practicable capable of being operated continuously without emitting smoke and if they are so satisfied or if they do not serve a notice upon such person before the expiration of the said period of six weeks no proceedings shall be taken against him under this section in respect of the installation of that furnace in accordance with the plans proposals particulars and information so submitted and furnished.
>
> (4) In determining for the purposes of this section whether a furnace is so far as practicable capable of being operated continuously without emitting smoke the Corporation or a Court shall if either of the parties so desire have regard to cost and to local conditions and circumstances.

Under section 65 of the 1946 Act, the provisions of the Public Health Act, 1936, relating to Power of Entry and obstructing execution of the Act are made applicable to the Manchester Corporation Act, 1946.

It will be noted that the submission of plans and proposals concerning new furnace installations and prior approval is not compulsory under the Act as it is in some States in the U.S.A. It is anticipated, however, that industrialists generally will seek an assurance that new installations do not violate the provisions of the Act and will submit plans and proposals accordingly. In fact, several proposals have been received and approved after investigation had shown that the requirements of the section had been complied with.

Appropriate steps will be taken to examine furnaces installed without submission of plans to ensure compliance with sub-section 1 of the section.

In view of the widely varying types of industrial furnaces which are likely to be installed and the technical problems which may arise in the consideration of plans and proposals concerning large installations and to questions of cost, practicability, etc., it was decided to set up a panel of technical experts drawn from appropriate departments of the Corporation.

The main functions of the panel will be to :—

(*a*) Examine plans and proposals of new industrial furnaces.

(*b*) Specify additional information regarding plans, etc., submitted to them.

(*c*) Examine and report upon industrial furnaces installed with or without submission of plans, etc.

(*d*) Give technical evidence in magisterial proceedings relating to violations of sub-section 1, and to questions of cost, local circumstances, etc., where these matters arise in the interpretation of the "best practical means" clause in the section.

The panel will also formulate a code of general principles to facilitate the consideration of plans and proposals concerning new furnace installations and the general principles obtaining in the U.S.A. in this connection should prove to be of value.

Preliminary consideration indicates that many problems as to practical application lie ahead, arising particularly from the serious fuel and engineering position and it is probable that the phrase " so far as practicable " in section 36 may be invoked to a greater extent than would be necessary in normal times.

Whilst recognising the questions of interpretation and administrative procedure are inseparable from pioneer legislation, it is felt that a measure of far-reaching significance to smoke abatement in the country generally has been launched successfully during the year.

Deposited Atmospheric Pollution.

The Corporation maintain 7 deposit gauges and 3 sulphur estimation appliances in various districts of the City to ascertain the extent and distribution of atmospheric pollution and co-operation is maintained in this matter with the Department of Scientific and Industrial Research.

The statistics obtained during the period April, 1946, to March, 1947, reveal a reduction in total deposits (average of 7 gauges) from 20·44 tons per square mile in the corresponding period 1945—1946 to 17·85 tons per square mile in 1946—1947.

No significant changes were noted in the 4 outlying stations, but appreciable reductions in deposits were recorded at Monsall Hospital, Philips Park, and Rusholme. The gauges at Philips Park and Monsall are situated in the vicinity of a congested industrial area, and the reduction in the deposits at these stations may be attributable to the lessened consumption of industrial fuel, particularly during the fuel crisis, and in this connection reference may be made to the records of these gauges during the critical month of February, 1947, in comparison with the monthly winter average.

Total Solids Deposited—Tons per square mile.

	February, 1947	Monthly winter average 1946-1947
Monsall	11·34	16·95
Philips Park	24·46	39·72

The reduction shown during the year at Rusholme is probably due in part to diminished industrial fuel consumption, in addition to the effect of domestic fuel stringency, as the gauge is situate in a district containing a large number of dwelling-houses, and is relatively close to the industrial centre of the City.

The attached table shows the results obtained from the recording stations in the City.

Deposited Atmospheric Pollution (Tons per square mile).

April, 1946 — March, 1947.

	Rainfall (inches)		Insoluble Matter		Soluble Matter		Total Solids	
	1946–47	1945–46	1946–47	1945–46	1946–47	1945–46	1946–47	1945–46
BAGULEY—								
Monthly mean	2·8	2·4	4·24	3·39	5·77	7·36	10·01	10·75
Monthly summer	3·2	2·2	4·89	4·27	6·99	5·17	11·88	9·44
Monthly winter	2·3	2·7	3·48	2·50	4·30	9·55	7·78	12·05
BOOTH HALL—								
Monthly mean	3·1	3·1	7·15	7·68	7·26	6·56	14·41	14·24
Monthly summer	3·3	3·0	8·06	7·90	6·48	6·60	14·54	14·50
Monthly winter	2·9	3·1	6·06	7·45	8·21	6·52	14·27	13·97
HEATON PARK—								
Monthly mean	3·3	3·2	8·64	9·83	6·56	6·69	15·20	16·52
Monthly summer	3·5	3·2	6·65	10·09	7·24	5·62	13·89	15·71
Monthly winter	3·1	3·3	11·02	9·57	5·75	7·76	16·77	17·33
MONSALL—								
Monthly mean	3·1	2·6	9·97	14·29	7·05	9·22	17·02	23·51
Monthly summer	3·3	2·4	10·25	18·96	6·82	9·33	17·07	28·29
Monthly winter	2·9	2·9	9·63	10·40	7·32	9·13	16·95	19·53
PHILIPS PARK—								
Monthly mean	3·4	3·0	25·43	31·11	9·93	10·26	35·36	41·37
Monthly summer	3·8	2·9	21·86	33·86	9·87	8·74	31·73	42·60
Monthly winter	3·0	3·2	29·72	28·36	10·00	11·78	39·72	40·14
RUSHOLME—								
Monthly mean	3·1	3·1	9·90	14·96	8·73	8·08	18·63	23·04
Monthly summer	3·5	3·0	10·70	22·38	8·03	7·93	18·73	30·31
Monthly winter	2·8	3·2	9·36	8·78	9·19	8·20	18·55	16·98
WITHINGTON—								
Monthly mean	2·8	2·6	8·01	6·71	6·31	6·91	14·32	13·62
Monthly summer	2·9	2·4	8·52	8·76	6·31	7·09	14·83	15·85
Monthly winter	2·7	2·9	7·51	4·67	6·30	6·74	13·81	11·41
ALL GAUGES—								
Monthly mean	3·1	2·8	10·48	12·57	7·37	7·87	17·85	20·44
Monthly summer	3·3	2·7	10·13	15·17	7·39	7·21	17·52	22·38
Monthly winter	2·8	3·0	10·97	10·24	7·29	8·52	18·26	18·76

Sulphur Pollution.

Measurements by Lead Peroxide Method.

April, 1946, to March, 1947	Weight in milligrammes SO_3 per 100 square centimetres exposed surface per day					
	Monsall		Rusholme		Withington	
	1946–47	1945–46	1946–47	1945–46	1946–47	1945–46
Monthly mean	4·33	4·22	2·93	1·90	1·88	1·91
Monthly mean (summer)	3·86	3·14	2·17	1·53	1·15	1·06
Monthly mean (winter)	4·79	5·51	3·70	2·84	2·60	2·76

Offensive Trades.

Systematic inspection of the 70 registered premises in the City has not been possible owing to the shortage of Inspectorial staff, but the visits made and the absence of complaints received indicate that the various trades involved were conducted without giving rise to nuisance.

2 applications for consent to establish the trades of fish curing were received. In 1 case consent was given to the establishment of the offensive trade for a limited period after the necessary structural and other requirements of the Corporation had been fulfilled. In the other case the applicant proposed to carry on the business in a basement which was totally unsuitable for the purpose and consent to the establishment of an offensive trade was refused. No appeal was made against the decision of the Corporation by the applicant.

The following offensive trades were on the register at the end of the year :—

Blood albumen maker	1
Bone manure and size manufacturer	1
Fat melters	2
Fish curers	2
Gut scrapers	3
Oil distillers	2
Pickle and sauce manufacturers	8
Rag and bone dealers	24
Rubber paste or solution spreaders	8
Rubber substitute manufacturers	2
Size maker	1
Soap boilers	4
Tallow melters	2
Tanners	4
Tripe boilers	6

Effluvium Nuisances.

Complaints received with regard to effluvia from trade premises necessitated 220 observations of varying duration and periods to trace the premises from which the offending odours were being discharged.

In 1 case the premises concerned are situate in a congested industrial district of the City, in which several potential sources of effluvia discharge are located. It was found that the discharge had occurred from factory premises which are controlled under the Alkali, Etc., Works Regulation Act and the circumstances were forwarded for attention to H.M. Inspector of Alkali Works, with whom close co-operation is maintained.

In another case the effluvium emanated from a large works owing to a breakdown of an absorption plant, and informal action resulted in the abatement of the nuisance.

Closet Conversions.

Although 55 pail closets were either demolished or converted to waterclosets during the year, 535 are remaining, 239 being in the Wythenshawe district, where 112 of the 118 remaining privy middens are also situate.

6 privy middens were converted to pail closets and 16 are no longer in use,

These obsolete types of conveniences are located mainly in areas in which sewer or other facilities are not available, but in some instances they are connected with property which will, in due course, be dealt with by clearance procedure under the Housing Act.

Additional sanitary accommodation (waterclosets and urinals) was approved at 26 premises other than new buildings. The premises concerned were mainly factories or other commercial buildings and the accommodation provided included ranges of waterclosets and, in some cases, ablution facilities in addition. In each case plans of the proposals were received indicating the provision of adequate ventilation to the closet and ante-chambers, dimensions, and constructional details. In several instances the accommodation was provided following representation to the owners or occupiers as to insufficient or unsatisfactory accommodation for employees.

Public Sanitary Conveniences.

There are 145 conveniences under the control of the Department with accommodation as follows :—

Males.	
With urinal, watercloset, and parcels accommodation ..	8
With urinal, watercloset, and washing accommodation ..	8
With urinal and watercloset accommodation	23
With urinal accommodation	73
	112

Females.	
With watercloset, washing, and parcels accommodation ..	10
With watercloset and washing accommodation	12
With watercloset accommodation	11
	33

The need for extension of this social service, particularly in suburban districts of comparatively recent development, is fully realised. Progress to this end has been slow and is due mainly to financial stringency and to priority given to other essential public works. The Health Committee has adopted a five year plan, the implementation of which should alleviate the position appreciably.

As a long term policy it is hoped to improve the existing facilities, including, where possible, the replacement of underground conveniences by well designed structures at ground level. Reference should be made to the persistent malicious damage which occurs to public urinals and at certain other conveniences in which it is not practicable to employ attendants. Appropriate action has been taken to minimise this form of wanton damage to civic property.

The expenditure on public conveniences was £31,217 and the receipts amounted to £9,217.

Sanitary Conveniences at Parks, Recreation Grounds, and Cemeteries.

Inspections of the above conveniences numbering 254 were made by the Inspectors in the course of their district duties, and unsatisfactory conditions were reported to the Parks and Cemeteries Department for attention. The conditions reported include defective flushing arrangements, choked drains, broken fittings, and fouled surfaces and were subsequently remedied.

Factories.

1. Inspection of mechanical and non-mechanical factories, etc., under the Factories Act, 1937, is shown on the subjoined table :—

Premises	Inspections	Written Notices	Occupiers Prosecuted
Factories (with mechanical power)	1,512	—	—
Factories (without mechanical power) ..	244	—	—
Total	1,756	—	—

2. Defects found are shown below :—

Particulars	Defects				Number of defects in respect of which prosecutions were instituted
	Found	Remedied	Referred to H.M. Inspector	Referred to City Architect	
Vant of cleanliness (Section 1)	8	*8	2	—	—
vercrowding (Section 2)	—	—	—	—	—
nreasonable temperature (Section 3)	—	—	—	—	—
nadequate ventilation (Section 4) ..	—	†2	—	—	—
neffective drainage of floors (Section 6)	1	—	—	—	—
anitary conveniences (Section 7)—					
Insufficient	19	5	—	1	—
Unsuitable or defective	68	‡64	—	—	—
Not separate for sexes	2	1	—	—	—
leans of escape in case of fire	5	—	—	5	—
Totals	103	80	2	6	—

* Includes 4 from previous year. ‡ Includes 29 from previous year.

† Outstanding from previous year.

Homework.

The homes of outworkers in the City are inspected under the provisions of the Factories Act relating to the employment of persons in unwholesome premises, in which certain classes of homework are carried on. There is also provision in the Public Health Act for the prohibition of specified types of homework in premises where infectious disease exists.

The homes of 867 outworkers were inspected and, whilst the general standard of suitability was satisfactory, 17 premises were found to be in a dirty condition and were subsequently cleansed following informal action. In 4 other cases, structural and sanitary defects were remedied after service of notice under the Public Health Act.

The Factories Act requires occupiers of factories and their contractor to keep lists of outworkers in certain classes of work and to send to the local authorities during the months of February and August a copy of such lists, showing all the outworkers employed by them during the previous 6 months. Occupiers of 29 factories were found to employ outworkers without keeping a list of the persons so employed. In 9 of these cases, the employers concerned were old-established firms who had recently commenced the employment of outworkers or who had employed them intermittently. In 2 other cases the employers had recently been demobilised from H.M. Forces, 14 related to newly established factories, whilst 4 firms who had furnished lists to the local authority had omitted to keep copies of such lists. The factory occupiers concerned with these infringements ascribed the omissions to inadvertence or ignorance of the provisions of the Act and were cautioned and in every case the list was completed subsequently in the manner prescribed by the Act.

At the end of the year, the number of firms employing outworkers in the specified classes of work was 280 ; the number of workers involved being 1,623, an increase of 21 firms and 134 outworkers over the previous year. 1,178 of the outworkers reside in the City and the remaining 445 live in districts of adjacent local authorities, to whom lists furnishing the necessary information were forwarded.

Particulars of the number of outworkers employed in the City and the classes of work in which they are engaged are shown in the following table :—

Trade	No. Employed
Wearing apparel	685
Tailoring	199
Overalls	10
Shopping bags	28
Umbrellas	85
Cord manufacturers	39
Soft furnishings	93
Toys	6
Chamois leathers	8
Coat hangers	11
Lampshades	14
Total	1,178

Shops Acts.

Routine inspections of 413 wholesale and retail shops were made and Kata thermometer readings disclosed unsatisfactory conditions of ventilation, which were subsequently remedied at several premises. Defects in sanitary accommodation were remedied in other cases by informal action. At 6 shops the prescribed forms were not exhibited with regard to assistants half holidays and the employment of young persons.

The small number of complaints received related mainly to Sunday trading and failure to close shops at the prescribed hours in the evening. These matters are administered by the Chief Constable, to whom the complaints were forwarded for attention.

Refuse Tips.

The disposal of various types of refuse by tipping is carried out at 48 sites within the City ; 36 of the tips being used by private persons and 12 by Corporation departments.

The material deposited at 45 of the tips was preponderantly of an innocuous character and consisted of building debris and trade waste. This work was carried out without giving rise to nuisance, except in 2 cases.

At 1 private tip, nuisance to residents in the neighbourhood was caused by the emission of smoke and fumes, owing to a quantity of combustible material in the tip having caught fire. An informal notice was served upon the owners, who consulted the National Fire Service officers as to the appropriate measures to be taken to extinguish the fire. "Blanketing" by sand was carried out with good results and the emission of smoke and fumes was reduced considerably. The conditions were not considered to justify statutory action and at the end of the year it appeared probable that a continuance of the repressive measures employed would be successful in extinguishing the smouldering material completely.

Complaints were received about another private tip concerning deposits of offensive matter which had been tipped on the site by unauthorised persons in the absence of the man who normally exercised supervision over the material deposited. Notice was served upon the lessee but could not be enforced owing to his serious illness and subsequent decease. The Town Clerk communicated with the owners of the land and the objectionable material was sealed off and tipping on the land was discontinued.

Controlled tipping of household refuse has been carried out by the Cleansing Department on an extensive scale for several years, mainly on low-lying land in the vicinity of the River Mersey. 3 sites are now utilised for this purpose, including one of approximately 19 acres of land which has been subject to occasional flooding from the adjoining River Mersey and is being levelled and consolidated as the tipping proceeds. Similar tipping is being effected at a site of about 6 acres near the River Medlock in North Manchester, in which district a ravine is being used also for the purpose.

This method of refuse disposal has served a useful purpose in the improvement of land for subsequent adaption for recreative purposes and has been carried out generally without giving rise to nuisance.

A complaint was received concerning a tip used by the Cleansing Department, referring to dirty paper and dust being blown towards houses in the neighbourhood from vehicles discharging household refuse at the tip. Representations to the Department concerned resulted in appropriate measures being taken to prevent a recurrence of the conditions which gave rise to the complaint.

Stables.

The inspection of stables is concerned mainly with the enforcement of byelaws relating to the storage and removal of manure at stated intervals to minimise house fly breeding, which occurs mainly in manure receptacles which are not completely emptied at weekly intervals. Effluvium nuisance to persons living or working in the vicinity of stables may arise by reason of soakage of offensive liquid where the paving of stables and stable yard is inadequate or in stables which are not regularly limewashed

Few complaints were received as to nuisances or violation of the byelaws and the 281 inspections made during the year disclosed 6 instances in which the byelaws had not been observed. Informal action resulted in satisfactory conditions being restored in these cases.

Rag Flock Acts, 1911—1928.

Reference was made in last year's report to the probability of new legislation concerned with improved standards of cleanliness of fillings used in the manufacture of bedding, etc., and in this connection it may be of interest to quote extracts from the conclusions and recommendations of the Inter-Departmental Committee on the Rag Flock Acts issued during the year :—

> " It is reasonable to infer that there is a definite potential danger to public health arising from the use of dirty filling materials.
>
> The Rag Flock Acts, 1911 to 1928, and the regulations made thereunder, are inadequate to secure proper cleanliness of rag flock used for the manufacture of upholstery, bedding, and other household furniture.
>
> It is desirable that filling materials in stuffed toys should be required to comply with any standard of cleanliness laid down for bedding and upholstery."

These views amply confirm the representations previously made on this subject by the Health Committee.

Rag flock is manufactured at only 1 factory in the City but there are 136 premises in which it is likely to be used in the manufacture of upholstery, bedding, and cushions, and 420 visits were made to these premises in connection with the administration of the Rag Flock Acts.

Of the 39 samples which were taken for submission to the Public Analyst, 3 failed to conform to the existing legal standard of cleanliness. The circumstances were not considered to warrant legal proceedings in these cases and cautionary letters were sent to the persons concerned.

Poisons and Pharmacy Act, 1933.

The administration of the above-mentioned Act and the Poisons Rules relating to the sale by retail of poisons in Part II of the Poisons List, is delegated to the Health Committee.

The forms in which Part II. poisons are commonly retailed include household ammonia, sheep dip, insecticides, disinfectants, rat and mice exterminants, and hair dyes, the premises involved being mainly grocers and hardware dealers. These two classes of retailers number 1,072 of the total of 1,183 listed sellers within the City.

During the year, 536 new applications for listing were received and approved and 80 listed sellers were removed from the list on their discontinuance of the sale of poisons. Visits totalling 1,365 were made to premises in connection with new applications, inspection of records, unauthorised sale of poisons, labelling, and other requirements. In 28 instances it was found necessary to issue cautions which resulted in full compliance with the Act and Rules.

Exhumations.

The Sanitary Inspectors attended 8 exhumations at City cemeteries to ensure compliance with Home Office regulations as to the observance of due care and decency and for the prevention of nuisance. In 7 instances the bodies were re-interred in other portions of the cemeteries and in the remaining case the body was taken to the Channel Islands for re-interment.

Barbers and Hairdressers.

Powers have been obtained in the Manchester Corporation Act, 1946, to require the registration of hairdressers, barbers, and their premises, and to make byelaws to secure the cleanliness of these premises, the instruments, towels, and equipment used therein, and the cleanliness of the persons employed.

Action is being taken to obtain comprehensive byelaws as a preliminary to the implementation of the powers to require registration under the section.

Cleansing of Filthy or Verminous Premises.

Additional powers are contained in Section 38 of the Manchester Corporation Act, 1946, to deal with filthy or verminous premises and the relevant section of the Act is reproduced below :—

SECTION 38.

Section 83 (Cleansing of filthy or verminous premises) of the Public Health Act, 1936, shall within the city have effect as if the following were substituted for sub-section (1) of that section:—

" (1) Where it appears to the local authority upon a certificate of the medical officer of health or any sanitary inspector that any premises—

(*a*) are in such a filthy or unwholesome condition as to be prejudicial to health ; or

(*b*) are verminous ;

the authority shall give notice to the owner or occupier of the premises requiring him to take such steps as may be specified in the notice to remedy the condition of the premises—

(i.) by cleansing and disinfecting them ;

(ii.) by distempering or whitewashing the interior surface thereof, or in the case of premises used for human habitation or as shops or offices by papering or painting the said interior surface ;

and the notice may require among other things the removal of wallpaper or other covering on the walls and in the case of verminous premises the taking of such other steps as may be necessary for the purpose of destroying or removing vermin."

The powers in Section 83 of the Public Health Act, 1936, as to filthy premises apply only to premises used for human habitation and do not require the removal of wall coverings, although this requirement applies to verminous premises.

The new powers of the Corporation include this provision, which is also applicable to shops and offices in addition to dwelling places and will facilitate the thorough cleansing of unwholesome work places in the city.

The Manchester Corporation Act, 1946, also contains provisions relating to the prohibition under penalty of the sale by dealers of verminous articles such as furniture, mattresses, bed-linen, clothing and similar articles and empowers the Medical Officer of Health or Sanitary Inspector to remove such infested articles for cleansing, purification, disinfection, or destruction.

Noise Nuisance.

Powers to deal with nuisance arising from noise were obtained in the Manchester Corporation Act, 1946, and are as follows :—

SECTION 40.

(1) A noise nuisance shall be liable to be dealt with as a statutory nuisance under the Public Health Act, 1936.

Provided that no complaint to a justice under section 99 of the said Act shall be of any effect unless it is signed by not less than three householders or occupiers of premises within hearing of the noise nuisance which is the subject of the complaint.

(2) In any proceedings under the Public Health Act, 1936, in respect of a noise nuisance occasioned in the course of any trade business or occupation it shall be a good defence for the person charged to show that he has used the best practicable means of preventing or mitigating the nuisance having regard to the cost and to other relevant circumstances.

(3) For the purpose of this section a noise nuisance shall be deemed to exist where any person makes or continues or causes to be made or continued any excessive or unreasonable or unnecessary noise which is injurious or dangerous to health.

(4) Nothing contained in this section shall apply to a railway company or their servants exercising statutory powers.

(5) Nothing in this section shall affect the power of the Corporation to make byelaws under section 249 of the Act of 1933.

It will be seen that action is open to the Corporation in cases in which the noise is either excessive, unreasonable, or unnecessary, and is also injurious or dangerous to health, and that in cases in which the noise is occasioned in the course of trade, business, or occupation, it would be necessary to prove that the person charged had not used the best practicable means to prevent or mitigate the nuisance, before a conviction could be obtained. In these circumstances, complaints are received concerning noises in respect of which statutory action cannot be taken, but experience has shown that noise can often be reduced as a result of interviews with the persons responsible.

Complaints concerning noise were received with regard to several trade premises situate in the vicinity of dwelling-houses. In 2 cases the complaints related to small boot repairing premises in which machinery was installed but in neither case was the noise of sufficient volume to be deemed a nuisance.

A complaint of noise from a large engineering works was investigated and the noise was found to be caused by two 30-h.p. fans connected with a metal dust extraction and collection plant. When the attention of the management was drawn to the conditions complained of, alterations to the outlet duct were carried out and resulted in a considerable reduction of the noise emitted in the vicinity and no further complaints were received in this case. Complaint was made by a number of householders regarding noise emitted from 2 small saw mills which had been established in sheds in the vicinity of dwelling-houses. These cases were referred to the City Surveyor for his consideration on Town Planning grounds.

Flooding of Premises.

The serious overflow of the River Irwell during the exceptionally heavy rainfall of September 20th, and which assumed major proportions in the adjoining City of Salford, also affected a number of premises in the low-lying Broughton Lane area in Manchester.

About 60 dwelling houses and several business premises in this locality were involved, cellars being flooded and the ground-floor living-rooms of houses were submerged to a depth of 2 to 3 feet. The flooding was accompanied by local surcharging of street sewers in an adjoining area causing flooding of cellars by reflux action in the cellar drainage systems.

The Rivers Medlock and Irk also overflowed on September 20th causing flooding of basements in the Charles Street and Collyhurst Road areas. Extensive flooding also developed as a result of the overflow and breaching of the raised banks of the River Mersey at Withington and Didsbury but few premises were involved as the adjacent low-lying land is undeveloped.

Flooding from the various causes mentioned gave rise to considerable inconvenience to the occupants of the premises concerned by the actual flooding and by the residual deposit of slimy mud ; the Irwell flooding in particular occasioned serious discomfort and hardship, which was alleviated by the action of the Social Welfare and other Corporation Departments. Following the Irwell flooding the disinfection of derelict premises and land in the immediate vicinity of dwellings was carried out by the Health Department as an emergency measure and supplies of disinfectant were made available to householders. Investigations revealed that the drainage and water supplies of premises in the area were not affected by the flooding. Minor structural defects which occurred in several houses as a result of the flooding were remedied by the owners following the issue to them of preliminary notices.

Training of Students.

The Inspectors took an active part in the theoretical and practical training of Ex-Service Student Sanitary Inspectors attending a rehabilitation course at the College of Technology, Manchester.

Other public health students received instruction and accompanied the Inspectors in the course of their routine duties.

Talks were given by the staff to various voluntary social organisations, the subjects including smoke abatement, hygiene in catering establishments, and other aspects of environmental hygiene.

Number of Inspections and Visits.

Primary inspections of dwelling-houses under Public Health Act, 1936	17,588	Dwelling-houses 63,030
Subsequent inspections of dwelling-houses under Public Health Act, 1936	33,436	
Visits *re* removals, disinfestations, etc.,	131	
Primary inspections of infected houses	1,528	
Subsequent inspections of infected houses	600	
Inspections of dwelling-houses *re* tuberculosis	1,008	
Other visits *re* tuberculosis	548	
Visits *re* contacts—infectious disease	3,871	
Visits *re* infirm persons	5	
Houses let-in-lodgings	1,774	
Common lodging houses	383	
Tents, vans, and sheds	76	
Homes of outworkers	867	
Canal boats	1,215	
Bakehouses	497	37,653
Food preparation premises	293	
Restaurant, etc., kitchens (including factory canteens)	1,145	
Butchers' shops and bacon stores	136	
Shops *re* sale of food	221	
Markets *re* sale of food	7	
Hotels, beerhouses, etc.	150	
Slaughterhouses, etc.	4	
Visits by sampling officers to obtain samples of water for chemical and bacteriological examination	53	
Visits by sampling officers to obtain samples of food and drugs	3,312	
Visits to registered premises of artificial cream manufacturers	2	
Visits to registered premises of wholesale margarine dealers	101	
Offensive trades	34	
Rag and bone dealers' barrows	1	
Observations *re* effluvium nuisances	220	
Works boiler plant *re* smoke abatement	531	
Refuse tips—Corporation	10	
Refuse tips—Private	94	
Stables	281	
Piggeries	101	
Sanitary accommodation at schools	280	
Sanitary accommodation in parks	254	
Public sanitary conveniences	370	
Cesspools	26	
Land	394	
Watercourses	38	
Streets, passages, roadways, and footpaths	1,054	
Exhumations	8	
Factories	1,756	
Shops *re* Shops Acts	413	
Cinemas, theatres, dance and billiard halls	90	
Churches	49	
Premises in connection with Rag Flock Acts	420	
Other business premises	2,380	
Premises for testing drains	61	
Visits *re* Pharmacy and Poisons Act, 1933	1,365	
Inspections of works in progress—drainage inspectors	5,280	
Miscellaneous visits	14,090	
Total	98,551	

WORK OF THE SPECIAL INSPECTORS.

The following statement indicates the work done by the two Special Inspectors:—

Number of visits *re*—

Infectious diseases	142
Food poisoning	4
Food contamination	16
Water supply	14
Vermin—Infested premises	112
Institutions	94
Tips	10
Nursing homes	48
Nursing agencies	19
Nuisances	12
Swimming baths	78
Export of washed rags and second-hand clothing	28
Public Health exhibitions	59
Public Health lectures	26
Massage or special treatment establishments	225
Steam disinfectors	19
Civic film	22
Ministry of Health training scheme for student sanitary inspectors	60
Miscellaneous	53
Tests of water applied at swimming baths	128
Tests applied to steam disinfectors	5

Insect Pests.

The Special Inspectors continued to be called upon to advise with regard to the eradication of insect pests in domestic and business premises.

D.D.T.—The use of D.D.T. (dichloro-diphenyl-trichloroethane) has been continued against common household pests and the red ants infesting certain municipal hospitals.

Ants.—The application of D.D.T. mainly in the form of a liquid spray consisting of a 3 per cent. D.D.T. solution in paraffin against red ants (Monomorium phaoronis) at the municipal hospitals has resulted in a marked diminution of these insects where they were previously persistent. Difficulties in applying the spray beneath wards and inaccessible places prevent, in many cases, the elimination of the pests as effectively as would be desired.

Bed-bugs.—The treatment of bug infested houses and flats with D.D.T. has proceeded in co-operation with the Housing Department. Up to the end of 1946, 224 dwelling-houses have been sprayed with a 3 per cent. D.D.T. solution in paraffin. Revisits and inspection at these houses has revealed a total elimination of the insects with no recurrence or re-infestation.

The use of thermal generation as a means of producing an insecticidal smoke has again been tried at a number of houses badly infested with bed-bugs. It was claimed by the proprietors that such insecticidal smoke incorporated one or the other of the two most recent insecticides and possessed residual toxicity. After repeated trials it was again found, however, that the methods and the results did not compare favourably with those of spraying in solution form.

House Flies.—The value of D.D.T. against the house-fly having been established, the walls and ceilings were sprayed at 27 day nurseries and 11 child welfare centres with favourable results. It is proposed to spray these premises again during the coming year.

Lice.—Visits were made to the men's hostels in the City and arrangements made for those in charge to obtain supplies of D.D.T. direct from the makers so that de-lousing of clothing and bedding could be done when necessary on the premises. This action was taken owing to the same men on occasions visiting the Corporation Cleansing Clinic for further treatment, which indicated that they had not brought all their infested clothing for fumigation at the first visit.

Establishments for Massage or Special Treatment.

Items most noteworthy under this heading were the appeals against the Corporation's refusal to grant licences to two applicants for establishments for massage and chiropody respectively, under the Manchester Corporation Act, 1924. No appeals of this nature has been made previously in Manchester. The two cases were heard by the Stipendiary Magistrate at the Manchester City Police Court. The Corporation contended that the technical qualifications of the applicants, which had been obtained by correspondence courses, were not such as could be considered reasonably necessary under the Act and, in spite of arguments to the contrary for and by the appellants, the Stipendiary Magistrate approved the Corporation's decision in the matter and dismissed the appeals.

During the year, 225 inspections have been made of the licensed establishments. There were no infringements of the byelaws and the general standard of hygiene of premises and equipment was satisfactory. Of the 123 licences issued, 111 were renewals and 12 were granted to new applicants. The number of licences ceded during the year was 8, leaving 115 establishments licensed at the end of 1946. Licences were refused to 12 applicants, mainly on the ground that their technical qualifications were not such as could be considered reasonably necessary.

Swimming Baths.

The sampling of water from swimming baths has been continued throughout the year at the public baths and the privately owned establishments and 78 visits were made. 64 samples were submitted to the Public Health Laboratory for bacteriological examinations and 128 tests for acidity-alkalinity and free residual chlorine present in the water were carried out by the Special Inspectors. The results obtained generally were satisfactory.

A number of the baths have, during the year, had chlorine gas plants installed, and efforts are being made to install such plants at all the establishments which still rely upon the chlorine dosage being effected by hand.

Graveyards.

A survey was made of 23 graveyards in Manchester to consider whether action should be taken to obtain Orders in Council to close them on public health grounds. It has been decided to ask the Minister of Health to take the necessary steps to have Orders issued for the closure of six of the burial grounds.

Export of Washed Rags, Second Hand Clothing, etc.

Inspection of these materials is carried out as a hygienic measure properly coming within the scope of the department and to assist business firms in attaining the standard of cleanliness required by the regulations made by Government Departments. 20 tons of washed rags were dealt with and the necessary certificates were issued. Certificates of efficient disinfection were also issued for some 600 articles of second hand clothing which were being exported.

HOUSING SURVEY SECTION.

By Arthur Moss, M.R.San.I., Senior Housing Inspector.

STAFF.

- Senior Housing Inspector.
- Assistant Senior Housing Inspector.
- 8 Housing Inspectors.
- 6 Clerks and typists.

There is at present a deficiency of 5 Housing Inspectors and 1 typist, but 7 temporary visitors are engaged on work in connection with the overcrowding provisions of the Housing Act, 1936.

Clearance Areas and Individual Unfit Houses.

Housing Act, 1936, *Sections* 25 *and* 11.

Though still limited by the Ministry of Health's circular 1866 (Sept., 1939), work on the clearance of unfit houses has increased. This is due to progressive dilapidation of many dwelling-houses, particularly in actual or potential clearance areas—properties which have become dangerous to occupants and/or the public, and where action became necessary on that account in advance of confirmation of clearance orders.

A total of 366 houses have been reported as vacated during the year ; 12 in clearance areas, 40 following procedure under Section 11, 144 without formal procedure in areas awaiting confirmation, 6 following procedure under Section 11, 36 without formal procedure from a proposed clearance area, and 128 individual unfit houses outside clearance areas.

Arising from these vacations 263 families have been rehoused ; 174 of these have been removed and rehoused by the Corporation and 89 have found their own accommodation. There is no legal bar to re-occupation of houses in areas where confirmation is still awaited and it is probable that tenants finding their own accommodation have moved into houses previously reported vacant within these areas.

The demolition of 234 houses was reported during 1946, 17 in clearance areas, 65 in areas awaiting confirmation, 37 in proposed clearance areas, and 115 individual unfit houses outside clearance areas. The attention of the City Architect has been drawn to these demolitions so that effective clearance of the sites could be arranged.

The following Table (A) shows the position of clearance work to date and the work outstanding in the respective areas.

Abatement of Overcrowding.

Housing Act, 1936, *Section* 58, etc.

The number of cases of overcrowding at the end of 1945 was 431.

During the year a survey of the overcrowding position was made, based on the billeting survey and completed by the special temporary staff retained for this work. It was found that 1,241 houses were overcrowded and that overcrowding had been abated in 317 cases during the year. Of these 235 families (1,796 persons) made their own arrangements for alternative accommodation and 82 families (346 persons) were moved into Corporation houses. 3 of these families (comprising 19 persons) passed through Monsall Cleansing Station before proceeding to their new addresses.

The position as at December 31st, 1946, in respect of overcrowded houses and families is as follows :—

Overcrowded houses—	Families	Adults	Children
927 containing 1 family	927	5,213	1,660
307 ,, 2 families	614	1,931	441
94 ,, 3 ,, ...	282	695	144
14 ,, 4 ,, ...	56	106	17
3 ,, 5 ,, ...	15	31	8
1,345	1,894	7,976	2,270

Forms required by the Ministry of Health.

(*a*)	(i)	Dwellings overcrowded at the end of 1946	1,345
	(ii)	Families dwelling therein	1,894
	(iii)	Persons dwelling therein	10,246
(*b*)		New cases of overcrowding notified during the year	1,231
(*c*)	(i)	Cases of overcrowding relieved during 1946	317
	(ii)	Persons concerned in such cases	2,142
(*d*)		Particulars of any cases in which dwelling-houses have again become overcrowded after the Local Authority have taken steps for the abatement of overcrowding	Nil

Table (B) shows the number of families classified according to the unit persons it contains under Housing Act standard and the permitted numbers of the houses occupied by those families. The table refers only to houses deemed to be of the " working class " standard.

The number of families not overcrowded is shown above the thick stepped line and those overcrowded below the line. These houses are overcrowded on " permitted number " irrespective of whether " mixing of sexes " occurs or not. The figures in **bold** indicate the number of families where overcrowding by mixing of sexes was reported without the number of occupants exceeding the " permitted number."

The figures showing the houses to be vacated are obtained from the individual reports and represent overcrowded houses occupied by one family only. The difference between the number of houses overcrowded on " permitted number " and the houses to be vacated represents the number of houses occupied by two or more families where the overcrowding would be abated by the rehousing of the lodger family without vacation by the tenant.

The major portion of overcrowding occurs in 764 houses having a " permitted number " of 5 to 6½, *i.e.*, houses of the two bedroom type ; 278 of these houses are occupied by two or more families.

Eradication of Vermin, etc.

Public Health Act, 1936, *Sections* 83—85.

(A) *Vermin infested premises* (Public Health Act, 1936, Section 83).

571 complaints of bug infestation have been received during the year ; of these 475 proved to be minor infestations and the remaining 96 were fumigated with HCN.

Table A – Clearance Areas – Progress Report, 1933—1946.

	Number of Houses in Area	Houses Vacated		Balance Outstanding to be Vacated	Houses Demolished		Balance Outstanding to be Demolished	Number of Families in Area	Families Moved to Dec., 1945			Families Moved during 1946			Balance Outstanding — Families to be Rehoused
		Total to Dec., 1945	During 1946		Total to Dec., 1945	During 1946			By Corporation	Own Account	Total	By Corporation	Own Account	Total	
Clearance Areas confirmed and completed	5,110	5,110	—	—	5,110	—	—	5,741	4,344	1,397	5,741	—	—	—	—
Pottery Lane	52	50	2	—	50	2	—	55	48	5	53	—	2	2	—
	5,162	5,160	2	—	5,160	2	—	5,796	4,392	1,402	5,794	—	2	2	—
Clearance Areas confirmed. Not completed—															
Miles Platting	688	688	—	—	687	—	1	692	584	108	692	—	—	—	—
Collyhurst II.	381	381	—	—	380	—	1	418	343	75	418	—	—	—	—
Ardwick	863	863	—	—	861	1	1	816	654	162	816	—	—	—	—
Oldham Road II.	8	7	—	1	6	—	2	8	6	1	7	—	—	—	1
Broom Lane	12	12	—	—	11	—	1	3	—	3	3	—	—	—	—
New Cross	1,787	1,702	10	75	1,638	14	135	1,727	1,176	463	1,639	13	—	13	75
Oldham Road (New Cross) Area 17	142	142	—	—	—	—	142	143	26	117	143	—	—	—	—
	3,881	3,795	10	76	3,583	15	283	3,807	2,789	929	3,718	13	—	13	76
Clearance Areas represented but not confirmed—															
Bradford Road	1,841	354	65	1,422	354	22	1,465	1,948	23	351	374	30	17	47	1,527
St. George's	1,183	161	80	942	161	32	990	1,179	—	156	156	5	11	16	1,007
Hutchins Street	61	3	1	57	—	3	58	62	2	—	2	—	1	1	59
Harpurhey	284	—	—	284	—	—	284	299	—	—	—	—	—	—	299
Monday Street	45	5	—	40	5	—	40	70	—	11	11	—	—	—	59
Enoch Street	31	—	—	31	—	—	31	32	—	—	—	—	—	—	32
Ruth Court	11	7	—	4	7	—	4	14	—	9	9	—	—	—	5
Fog Lane	10	—	—	10	—	—	10	9	—	—	—	—	—	—	9
Oldham Road (New Cross) Areas 1 to 16 ..	786	80	38	668	80	8	698	844	1	79	80	4	6	10	754
	4,252	610	184*	3,458	607	65	3,580	4,457	26	606	632	39	35	74	3,751
Clearance Areas inspected but not represented— St. John's	615	129	42	444	130	37	448	671	—	144	144	6	38	44	483
Individual unfit houses not in clearance areas ..	526	362	128	36	303	115	108	463	223	71	294	116	14	130	39
Total	14,436	10,056	366	4,014	9,783	234	4,419	15,194	7,430	3,152	10,582	174	89	263	4,349
Houses dealt with as individual unfit houses—															
(*a*) Not in clearance areas	526	362	128	36	303	115	108	463	223	71	294	116	14	130	39
(*b*) In clearance areas:															
Bradford Road	75	37	29	9	36	11	28	65	23	1	24	30	2	32	9
St. George's	9	—	5	4	—	3	6	9	—	—	—	5	—	5	4
Hutchins Street	5	3	1	1	—	3	2	4	2	—	2	—	1	1	1
Oldham Road (New Cross)	12	1	5	6	1	1	10	13	1	—	1	4	2	6	6
St. John's	9	—	6	3	—	—	9	11	—	—	—	6	1	7	4
Total	636	403	174	59	340	133	163	565	249	72	321	161	20	181	63

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* This figure last year was based on the number of houses demolished. Vacant houses are liable to be reoccupied and were not considered as permanently vacant as would be the case in Confirmed Areas. The true rehousing position is better ascertained by accepting such houses as vacant. In consequence all vacant houses have been accepted as such this year.

Table B—Overcrowding Survey of the City of Manchester, 1946. Houses of Working Class Standard.

	Permitted Numbers.																							Overcrowded on Permitted Number Standard	Overcrowded by Mixing of Sexes only	Not Overcrowded
Number of Occupants	1	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7.	7½	8	8½	9	9½	10	10½	11	11½	12 and over			
1	—	—	149	6	1,386	25	77	331	3,531	87	636	700	1,304	5,647	459	1,222	685	348	435	168	210	145	514	—	—	18,095
1½	1	1	—	1	77	1	10	68	804	20	204	201	280	1,279	105	253	134	66	85	33	34	11	99	1	—	3,766
2	—	2	107	5	888	14	96	536	6,771	222	2,298	2,351	2,823	13,056	1,342	4,788	2,485	1,177	1,532	635	802	497	1,939	2	—	44,364
2½	—	1	6	—	150	7	25	220	2,234	113	1,079	882	908	3,916	367	1,160	519	312	301	120	177	105	391	7	—	12,986
3	—	—	3	—	**5** 162	**1** 10	48	320	4,679	182	2,811	2,764	2.322	10,336	1,142	4,318	2,255	1,224	1,348	631	796	579	2,125	3	**6**	38,052
3½	—	—	2	1	25	5	**1** 15	86	1,341	56	1,028	982	687	2.737	338	1,114	573	342	374	168	224	145	540	28	**1**	10,755
4	—	—	1	—	16	2	**2** 27	**1** 84	**12** 1,510	78	1,673	1,755	1,087	**1** 3,995	654	2,605	1,319	788	857	440	568	389	1,985	19	**16**	19,814
4½	—	—	—	—	8	—	6	**5** 45	**12** 470	24	581	626	339	1,153	204	686	379	239	283	114	142	129	600	14	**17**	6,014
5	—	—	—	1	8	2	2	21	**79** 451	**1** 18	**1** 620	721	**1** 410	**1** 1,304	233	978	496	351	435	226	311	210	1.358	34	**83**	8,122
5½	—	—	—	—	5	2	2	14	121	**2** 6	**2** 212	**1** 258	**2** 127	454	84	303	153	153	138	73	95	75	471	144	**7**	2,602
6	—	—	—	—	1	—	1	11	130	13	**3** 201	**1** 236	**2** 134	**3** 359	83	342	186	133	172	98	133	105	831	156	**9**	3,013
6½	—	—	—	—	1	2	—	6	51	8	64	**9** 96	**2** 57	**2** 185	29	142	78	65	74	45	51	47	333	132	**13**	1,202
7	—	—	—	—	2	—	1	5	64	7	49	73	40	**11** 127	32	124	52	63	64	48	65	39	493	201	**11**	1,147
7½	—	—	—	—	1	1	—	5	24	1	20	44	14	**6** 56	**2** 22	45	39	28	21	26	21	14	196	110	**8**	468
8	—	—	—	—	—	—	—	2	19	1	17	17	5	34	8	44	33	27	18	10	21	**1** 18	287	95	**1**	466
8½	—	—	—	—	1	—	1	1	5	—	8	11	7	15	4	19	10	22	12	8	10	7	116	53	—	204
9	—	—	—	—	—	—	—	—	4	—	1	6	2	16	8	15	14	7	10	3	8	8	157	52	—	207
9½	—	—	—	—	—	—	—	—	—	—	—	3	1	4	7	5	5	8	7	3	7	4	49	25	—	78
10	—	—	—	—	—	—	—	—	—	—	1	—	2	4	—	4	4	3	4	1	3	5	89	18	—	102
10½	—	—	—	—	—	—	—	—	—	—	—	—	2	4	1	5	—	1	—	—	—	2	35	13	—	37
11	—	—	—	—	—	—	—	—	—	—	—	—	1	2	3	1	4	—	2	1	1	1	34	14	—	36
11½	—	—	—	—	—	—	—	—	1	—	—	—	2	—	1	—	1	2	2	1	—	1	19	10	—	20
12 and over	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	2	1	—	3	—	1	1	71 1	10	—	71
Overcrowded on Permitted Number	1	3	12	2	68	9	13	65	419	30	160	155	36	79	24	32	15	6	7	2	1	1	1	1,141		
Overcrowded by Mixing of Sexes only	—	—	—	—	**5**	**1**	**3**	**6**	**103**	**3**	**6**	**11**	**7**	**24**	**2**	—	—	—	—	—	—	**1**	—	—	**172**	
Not Overcrowded	—	1	256	12	2,663	62	298	1,690	21,791	806	11,343	11,572	10,518	44,604	5,102	18,143	9,410	5,353	6,170	2,850	3,709	2,536	12,732	—	—	171,621 [Includes 172 overcrowded by Mixing of Sexes only]
Houses to be Vacated	—	—	—	—	51	8	12	53	297	21	96	72	20	41	14	16	7	4	1	1	—	—	—	714	—	
Vacant Houses as reported in Billoting Survey, 1946. Classified according to P.N.	—	—	—	—	3	1	1	3	35	—	8	6	11	47	4	25	17	14	31	16	14	15	111	—	—	362

In accordance with the requirements of the Ministry the following table summarises the work done. Privately-owned houses, Corporation houses, and business premises are shown separately.

Premises found to be verminous	Control measures advised	Fumigation with HCN	Other methods of treatment
Privately-owned houses :			
Minor infestations ..	144	12	1 DDT 131 Sulphur dioxide ; chlorinated washes. Insecticidal spraying.
Serious infestations ..	146	72	61 Sulphur dioxide. Chlorinated washes. Insecticidal spraying. 1 Cimex 12 DDT.
Corporation houses	270	10	4 Cimex. 224 DDT. 32 Other methods.
Business premises :			
Minor infestations ..	8	—	8 Spraying and washes.
Serious infestations ..	3	2	1
	571	96	475

(B) *Furniture and Effects* (Public Health Act, 1936, Section 84).

To minimise the risk of transfer of infestation on removal from verminous premises to either Corporation or privately-owned houses, removals by the Corporation contractor are arranged. This enables the furniture and effects to be fumigated with HCN during the removal and before delivery to the new address. The Corporation meets the whole cost of removals from clearance areas, individual unfit houses, and where the abatement of overcrowding is carried out. Tenants of other verminous houses who have been allotted Corporation houses are required to pay 40s. towards the cost of removal. Other tenants of verminous houses who move to privately-owned houses and avail themselves of this facility are required to pay the whole cost of removal. The fumigation in all cases is done by the Corporation contractor at Monsall Disinfecting Station at the expense of the Local Authority in accordance with Section 84.

The removals effected during the year are set out below :—

From individual unfit houses and clearance areas to Corporation houses	174
From houses outside clearance areas to Corporation houses ..	193
From overcrowded houses to Corporation houses	3
Fumigation and removal to private houses	5

In addition there were 6 cases where mattresses or bedding infested with moths or similar pests needed fumigation. This work was carried out at a nominal charge.

Facilities are given for tenants from any of the houses referred to above to attend Monsall Disinfecting Station so that they can have their personal clothing cleansed and thus eliminate every possibility of the transfer of vermin to their new addresses. 354 adults and 317 children took advantage of this service.

Survey of Vacant Houses.

A survey of 6,608 houses reported as vacant in 1945 was carried out during the early part of this year. By 31st July, 3,168 of those houses were occupied and of the remainder 969 appeared to be habitable and 2,471 were reported as not habitable. Lists of vacant habitable houses were passed on to the Director of Housing from time to time as reports came in with a view to reconditioning or requisitioning.

" Share Your Homes " Scheme.

The survey of the City with regard to the Ministry of Health's scheme for the temporary sharing of homes was carried out by visits being paid to 17,454 houses, which a previous survey proved to be under-occupied to the extent of three persons or more. Offers of accommodation were made in 382 cases and of these 123 were duly registered. 21 offers are held in abeyance at the request of the tenants. There were 34 cases where the accommodation offered was not suitable, nor could it be made suitable for the purpose. 204 offers were withdrawn at the request of the tenant for private reasons, such as husband's objection, or son returning home. Also, there were many who, on second thoughts, preferred to make their own private arrangements.

Temporary Staff.

The services of the temporary staff engaged for the billeting surveys were dispensed with on 2nd November. 7 members of this temporary staff were re-engaged to carry out a survey of overcrowded houses and houses likely to become overcrowded within the next five years, to measure rooms from which the calculations are made to determine the " permitted number," to complete the statistical work in relation to the overcrowding survey, and to record the latest information disclosed from the recent surveys on the cards filed in the department.

Billeting of Workers.

The billeting of persons coming to the City for employment is undertaken by the permanent staff as requests are received. This is in accordance with the Ministry of Health's desire for local authorities to continue this service. 711 billets with board and lodging were found during the year and 675 workers were accommodated in that respect.

MANCHESTER AND DISTRICT REGIONAL SMOKE ABATEMENT COMMITTEE.

The Manchester and District Regional Smoke Abatement Committee, which was formed originally in 1924, suspended its normal activities in September, 1939, on the outbreak of the last war.

Towards the end of 1945 it was suggested by some local authorities in the area and by the Ministry of Health that the Regional Committee should be reconstituted and resume its former functions. In the area represented by a radius of 15 miles of the City of Manchester there are 91 local authorities, including the County Councils of Lancashire and Cheshire, and all these authorities were approached with a view to resumption of membership of the Regional Smoke Abatement Committee.

A meeting of representatives of the local authorities who had agreed to join the Regional Committee was held in the Town Hall, Manchester, on 18th June, 1946, when they were welcomed by the Lord Mayor. At this meeting Councillor T. M. Larrad, of Manchester, was appointed Chairman, and Alderman S. T. Marron, J.P., of Oldham, Deputy Chairman, for the ensuing year.

An executive committee, representing the county councils, county boroughs, municipal boroughs, urban districts, and rural districts was also appointed and it was decided that the Medical Officer of Health of Manchester should be Honorary Secretary and a member of his staff Assistant Secretary.

The Manchester and District Regional Smoke Abatement Committee became a member of the National Smoke Abatement Society during the year and conducted an enquiry throughout the North West region, for the Society, on the subject of fuel burning installations in new houses.

The Regional Committee forwarded a resolution to the Minister of Fuel and Power supporting the objectives set out in the publication "Domestic Fuel Policy," and at the same time pressed for the provision of information centres by the Ministry.

The Committee were very active during the latter part of 1946 in the educational field with regard to training of stokers and other persons concerned with the maintenance of furnace installations. An appeal was addressed to industrial concerns in the area and as a result a course of instruction in boiler house practice was commenced at the Manchester Municipal College of Technology and attended by about 120 students.

With a view to extending these educational facilities to other centres in the area, the Regional Committee arranged for the formation of a panel of lecturers. In this connection consideration was given to the desirability of improving the standard of training and it was decided to recommend that in all cases both the syllabus and examination in boiler house practice, where held in centres in the Regional Committee's area, should be based on those of the City and Guilds of London Institute. Many applications were received for inclusion in the panel of lecturers and the course, which was arranged for the persons selected for inclusion, is believed to be the first of its kind in the country.

The standard syllabus of the City and Guilds of London Institutes was stressed throughout this course. At the conclusion of the course eleven persons were deemed competent to organise and conduct courses in boiler house practice and three persons to assist in organisation and lecturing. It is intended that these lecturers shall be made available for further courses in boiler house practice to be organised in various centres in the Regional Committee's area during 1947-48.

The Regional Committee agreed on the desirability of extending their area so as to coincide with that of the South Lancashire and North Cheshire Advisory Planning Committee and that the local authorities concerned should be invited to become members of the Regional Smoke Abatement Committee. Other matters to which the Committee gave consideration were district heating and the difficulties experienced by local authorities in the administration of smoke abatement legislation.

79 local authorities were members of the Regional Committee at 31st December, 1946.

RATS AND MICE (DESTRUCTION) ACT, 1919.
INFESTATION ORDER, 1943.

STAFF.

Full time—

G. H. Adcock.. .. .. Rodent Executive Officer
G. H. Ackerley .. .. Assistant Rodent Executive Officer
4 Clerks
9 Foremen (each supervising 5 men)
45 Rodent Operators

The Rodent Control Section has, since the latter part of August, 1946, taken over a portion of the premises previously occupied by the A.R.P. Training Centre in Joddrell Street, and from here all matters relative to rodent infestation under the Act and Order are now administered by the Rodent Executive Officer.

There has been no essential change, up to the present time, in the nature of the legislation governing infestation of land by rodents. The *occupiers* are still responsible for taking such steps as may be necessary and reasonably practicable for the destruction of rats and mice in or on any land, and for preventing such land from becoming infested with rats or mice. (The term " land " includes any buildings or erection on land, and any cellar, sewer, drain, or culvert in or under land.)

The chief weakness in present legislation is that *owners* of land have no responsibility in connection with rodent infestation. This circumstance gives rise to many difficulties, because there are many factors governing infestation which are in practice beyond the scope of the occupiers carrying out destruction measures. In dealing with any infestation, it has always been the policy of the Rodent Control Section first to locate the possible source. To do this may necessitate taking up floors of living rooms, kitchens, water-closet chambers, surfaces of yards, etc., in both business premises and dwelling-houses, in order to trace a suspected source of infestation and remedy any defects found in the drainage system.

There is no difficulty, however, in dealing with suspected sources in public highways, as the City Surveyor carries out the necessary examination on request, and remedies any defect for which his department is responsible. Nor is trouble encountered in charging owners with the cost of drainage work for which they are responsible. In the latter case the necessary work is carried out on receipt of a signed order giving the Corporation the requisite authority to effect repairs. The signature to the order is usually obtained by the Rodent Executive Officer.

The importance of this class of work cannot be over-estimated as, once a source of infestation is discovered, and necessary remedial action taken, the destruction of rats becomes an easier matter for the occupiers and a clearance is soon effected.

It is very satisfactory to record that in this City, owners and agents do, generally speaking, co-operate with this Section to a very large degree, which is an incentive to occupiers to fulfil their obligations.

(It should be noted that these remarks are meant to apply only to cases where some suspected or obvious source exists within the premises.)

Complaints.

Occupiers continue to report infestations of rats and mice to this Department. Each complaint is investigated in order to ascertain the cause or locate the source of infestation. This entails inspecting properties, whether dwelling-houses or business premises, on a " block " basis, which means an inspection of the *area* in which the particular infestation has occurred.

Advice is given to the occupiers and destruction measures carried out by the Corporation service on receipt of a signed undertaking to pay any costs incurred.

450 complaints of the presence of rats and mice, involving 993 premises, were dealt with by the Rodent Control Section during the year. 818 of these premises (82·4 per cent.) were found to be infested with rats, 114 (11·5 per cent.) with mice, and at 61 (6·1 per cent.) there was no visible evidence of rats or mice.

65·8 per cent. of premises were infested internally and 34·2 per cent. externally (yards, passages, gardens, etc.).

Of the 993 premises visited on complaints, more than a third (37·6 per cent.) lay in the area covered by the City-centre, Hulme, Chorlton-upon-Medlock, and Moss Side.

A summary of the types of property visited and conditions found is given in Table I.

Causes of Infestation.

Infestation in premises may be due to one or more of a large number of causes. The source may be a defect in the structure or in a drain or sewer, which must be remedied before a clearance can be looked for. Otherwise, any destruction measures carried out can only be of a temporary nature, as other rodents will gain access to the premises through the unremedied defect. (These remarks, of course, do not apply in the case of rodents being brought into the premises in packages, etc.)

Various types of sewers in the City may form a " reservoir " infestation affecting many premises in the region where the breakdown in the system occurs. No less important are the defects located in private drains and their connections to the sewers. It will be seen that, should the sewers be free from rats, defects in private drains would not cause infestation of the premises connected to them. These conditions formed the largest single cause of infestation during 1946 (responsible for 39·2 per cent. of total infestation).

Next in importance was " dilapidated premises and defects in structure," accounting for 35·4 per cent. of total infestation.

Food supplies are also an important factor in supporting the rodent population of an infested premises or area. It will be appreciated that where food is plentiful, greater virility results where the infestation is of a minor degree, and, like humans, the rodents can become overcrowded, producing a stock of a less virile nature, which will seek sustenance in other quarters to maintain their fecundity. It would be a good thing for the community if all forms of waste could be eliminated simultaneously.

The accumulation of litter, debris, waste food, food paper wrappings, and garbage are evidence of commodity waste, but they are also the means of providing harbourage for rodents. The presence of aids to infestation is conducive to bad hygiene and is injurious to public health.

" Neglect to protect foodscraps and food paper wrappings, etc," accounted for 7·8 per cent. of total infestation.

Table 2 assesses the relative importance of the causes of infestation and also gives a detailed analysis of drainage infestation.

Destruction Measures.

In accordance with the Act and Order the statutory obligation to carry out these measures is upon the occupiers. They may do this work themselves, after being suitably advised by the Rodent Executive Officer, employ a private operating company, or request the services of the Corporation destruction service, the latter being chargeable on a prime cost basis.

Consequently, the number of rodents destroyed by occupiers cannot be estimated, as only meagre information comes to the notice of this Department. It may be said, however, that a large number are destroyed by their efforts.

One destruction Company reports having killed 332 rats and 366 mice during 1946. The same firm laid 38,000 poison baits, of which 6,000 were taken. 654,000 mouse-baits and 156,000 rat-baits are reported to have been laid by another company during the year, but in this case no estimate of the actual destruction of rodents is available.

Destruction by Corporation Service.

As many as 244 premises were disinfested by the Corporation service during 1946. At 232 of these destruction was carried out by means of poison, at 3 by poisoning and trapping, 7 by trapping alone, and at 2 by gassing.

Prebaiting :—		
Prebaits laid in all premises	16,467	
Prebaits taken by rodents	13,863	(84·2 per cent.)
Detailed analysis of " Takes " :—		
Complete take	1,541	(9·4 per cent.)
Good Take	8,490	(51·6 per cent.·
Small Take	3,832	(23·2 per cent.)
No Take	2,604	(15·8 per cent.)
Poisoning :—		
Poison baits laid	4,355	
Poison baits taken	3,375	(77·5 per cent.)
Detailed Analysis of " Takes " :—		
Complete Take	215	(4·9 per cent.)
Good Take	1,825	(41·9 per cent.)
Small Take	1,335	(30·7 per cent.)
No Take	980	(22·5 per cent.)

Dead rats collected as result of poisoning and trapping	410
Dead mice collected as result of poisoning and trapping	158
Estimated total kill (Ministry of Food calculation)	21,775 rodents

Destruction Measures by Other Corporation Departments.

Poison baits laid by other Departments	3,393
Poison baits taken by rodents	1,638
(48·3 per cent. of baits laid were taken.)	
Rodents destroyed by means other than poison ..	1,873 rats, 195 mice.

City Surveyor's Department.

This Department is carrying out destruction measures in the sewers in accordance with the requirements of the Ministry of Food. These comprise an initial treatment and a maintenance treatment, by means of prebaiting and poison baiting at manholes in the sewer. The results of pre-bait and poison bait "takes" are recorded and, on the basis of these data, an estimate of kill is arrived at in accordance with the Ministry's formula for calculation.

The information supplied is as follows :—

Manholes poison-baited : 5,738.
Dead rodents found : 231.
Estimate of kill (Ministry of Food) ; 10,090 rodents.

Repressive Measures.

1,482 revisits to infested premises were made by executive officers and rodent operators.

Prevention of Re-infestation.

The amount of proofing work carried out and its division between owners and occupiers is indicated in Table 3.

Result of Destruction Measures.

During the year 960 premises were cleared of rodents by occupiers, rat-catchers, and Corporation service. The Corporation service was responsible for ridding 244 premises of rats and mice in a period of three months. For particulars of these measures, see Table 3.

Tracing of Rat Burrows in Relation to Drainage Infestation.

81 examinations of undermined surfaces were carried out by owners and occupiers of premises, by the Highways Department and by the Sanitary Section of the Public Health Department. The results of these examinations and details of action taken are given in Table 4.

Rodent Control Survey.

The Corporation was directed by the Ministry of Food to carry out a survey of the area under its control, in order to ascertain the degree of infestation by rats and mice and to carry out destruction measures where necessary.

The survey was commenced in September when the operational staff was increased from 4 to 54, including 9 foremen (each supervising 5 men). The operators complete cards appropriate to the class of infestation found and return them to the office for recording. Disinfestation is carried out after occupiers have signed an undertaking to pay any costs incurred, a basic charge being fixed by the Department. A summary of the work done is appended.

Summary of Rodent Control Survey.

Details of Work Done between September and December, 1946.

The survey was commenced in September on the northern side of the city. Up to the end of the year the areas covered included Blackley, the greater part of Moston, Crumpsall, Newton Heath, and Harpurhey.

The figures for the whole of this northern area are as follows :—

Premises Surveyed.

29,771 premises have been visited and inspected by Rodent Operators.

27,856 of these (93·6 per cent.) were dwelling-houses and 1,915 (6·4 per cent.) business premises of various kinds.

The types of property visited are classified in Table 5.

Conditions Found.

At 27,453 premises, or 92·2 per cent. of those visited, there was no visible evidence of rats or mice.

322 premises (1·1 per cent.) were rat infested.

1,996 premises (6·7 per cent.) were mouse infested.

An analysis of infestation—showing number of premises of each type infested—is made in Table 6.

The above figures for percentage infestation conceal some important differences as between different wards. A table is, therefore, appended indicating percentage infestation in each ward (Table 6a).

Rat-infested Premises.

Of 322 rat-infested premises, 3 were reservoir (0·9 per cent.), 41 were major (12·7 per cent.), and 278 were minor (86·4 per cent.) infestations.

The type of property rat infested and category of infestation at each type are detailed in Table 7.

Table 1.

Total Number and Type of Premises Visited in Response to Complaints, 1946.

Type of Premises Visited	Premises Surveyed	Rat Infested	Rat and Mouse Infested	Mouse Infested	Internal	External	No Visible Evidence
Air Raid Shelters—Public	3	3	—	—	1	2	—
Allotments, Smallholdings	5	5	—	—	—	5	—
Bakehouses	2	1	—	1	1	1	—
Churches, Chapels, etc.	1	1	—	—	1	—	—
Clubs	3	3	—	—	2	1	—
Derelict Buildings	10	9	—	1	7	3	—
Dwelling-houses	716	568	1	90	426	233	57
Factories—Non-food	72	71	—	1	57	15	—
Farms	3	3	—	—	1	2	—
Garages	6	6	—	—	4	2	—
Institutions, Homes	2	2	—	—	1	1	—
Land, open ground, etc.	6	6	—	—	—	6	—
Offices	9	3	—	6	7	2	—
Piggeries	2	2	—	—	—	2	—
Public Buildings	1	1	—	—	1	—	—
Public Houses	4	4	—	—	3	1	—
Railway Sidings	7	7	—	—	7	—	—
Refreshment Houses, Cafes	8	7	—	1	7	1	—
Restaurants	2	2	—	—	2	—	—
Schools—Private	1	1	—	—	1	—	—
Schools—Public	5	5	—	—	5	—	—
Shops—Food	50	43	—	4	26	21	3
Shops—Non-food	43	36	—	6	30	12	1
Stables	4	4	—	—	4	—	—
Sports Grounds	1	1	—	—	—	1	—
Warehouses—Food	3	2	—	1	3	—	—
Warehouses—General	24	21	—	3	16	8	—
Totals	993	817	1	114	613	319	61

82·3 per cent. of premises visited were rat infested.
11·5 ,, ,, ,, ,, mouse infested.
0·1 ,, ,, ,, ,, rat and mouse infested.
At 6·1 ,, ,, ,, there was no visible evidence of rats or mice.

Table 2.

Classification of Causes of Rat Infestation in Premises Primarily Visited during 1946.

Cause of Infestation	Interior Infestation		Exterior Infestation		Totals	Percentage
	Business Premises	Dwelling-houses	Business Premises	Dwelling-houses		
Directly due to or associated with defective or disused drains or sewers	51	125	39	105	320	39·17
Due to nature of business carried on in premises or vicinity ..	30	4	7	2	43	5·26
Tips, refuse dumps, market areas, etc.	—	3	—	14	17	2·08
Neglect in protection of food scraps and wrappings, poultry kept, etc.	1	16	3	44	64	7·83
Dilapidated premises or defects in structure	54	154	21	60	289	35·37
Vicinity of open or culverted water-courses, railway cuttings or sidings	17	14	3	1	35	4·29
Condemned property	—	10	—	6	16	1·96
Bombed sites	8	22	—	3	33	4·04
Totals	161	348	73	235	817	100·00

Analysis of Drainage Infestation.

Infestation	Business Premises		Dwelling-houses		Totals
	Interior	Exterior	Interior	Exterior	
Primary investigations into rat infestation (=100 per cent.)	161	73	348	235	817
Directly due to defective or disused drains or sewers	22	27	63	27	139
Associated with defective or disused drains or sewers	29	12	62	78	181
Premises affected by drainage infestation	51	39	125	105	320
Percentage of drainage infestation in each group	31·68	53·42	35·92	44·68	39·17

Table 3.
Destruction and Prevention Measures Carried Out during 1946.

Measures carried out	By whom carried out	Business Premises	Dwelling-Houses	Totals
Prevention only	Occupier	3	12	15
Destruction only	Occupier	40	236	276
	Owner	1	4	5
	Rat-catcher	2	—	2
	Corporation service	227	17	244
Destruction and Proofing	Occupier	90	188	278
	Owner	3	—	3
	Rat-catcher	—	—	—
	Destruction by occupier, proofing by owner	—	2	2
	Destruction by rat-catcher, proofing by occupier	11	—	11
	Destruction by rat-catcher, proofing by owner	—	—	—
	Destruction by occupier, sewers by City Engineer	12	29	41
	Destruction by occupier, drains by owner ..	14	69	83
	Totals	403	557	960

TABLE 4.
Tracing of Rat Burrows in Relation to Drainage Infestation, 1946.

	By City Engineer	By Owners and Occupiers	By Sanitary Section	Totals
Examinations made	50	12	19	81
Conditions found or action taken :—				
Defective sewers reconstructed by Highways Department	5	—	—	5
Minor defects in sewers repaired	25	—	13	38
Disused privy midden—drains removed ..	8	—	—	8
Other disused drains removed or otherwise dealt with	6	6	1	13
Defective sewers and drains repaired by Corporation at owner's expense	1	—	3	4
Defective drains remedied by owners or dealt with by Sanitary Section	—	2	31	33
Outward rat burrows consolidated	13	—	—	13
Surface rat burrows consolidated	4	3	—	7
Undermining due to causes other than rats	10	1	—	11
Totals	72	12	48	132

Northern Area.

Table 5.

Type of Premises Surveyed.

Type	Inspected
Air Raid Shelters—Public	22
Air Raid Shelters—Private	3
Allotments, Smallholdings	26
Bakehouses	6
Camps	2
Cemeteries	3
Churches, Chapels	39
Clubs	14
Clinics	1
Dairies	4
Ditches, brook-courses	19
Day Nurseries	2
Dwelling-houses	27,856
Derelict buildings	2
Factories—Food	5
Factories—Non-food	106
Farms	25
Garages	38
Hospitals	11
Hotels—Residential	11
Institutions	3
Huts, Wooden Structures, etc.	4
Land, open ground, etc.	47
Offices	58
Parks, Recreation Grounds	9
Piggeries	3
Public Entertainment	12
Poultry Runs	11
Public Buildings	22
Public Houses	31
Railway embankments	8
Railway Sidings	7
Railway Stations	2
Refreshment Houses	5
Refuse-tips—Private	2
Refuse-tips—Public	7
Restaurants	1
Reservoirs	10
Schools—Private	22
Schools—Public	22
Shops—Food	445
Shops—Non-food	765
Stables	24
Store-sheds	36
Warehouses	14
Sports Grounds	5
Slaughterhouses	1
	29,771

Table 6.

Inspection of Infested Premises.

Type of Premises	Inspected	Rat Infested	Mouse Infested
Air Raid Shelters—Public	10	1	1
Allotments, Smallholdings	24	9	—
Bakehouses	1	1	—
Churches	22	1	1
Clubs	5	—	1
Dairies	1	1	—
Ditches	19	12	—
Dwelling-houses	27,856	161	1,892
Derelict buildings	2	—	1
Factories—Food	4	1	1
Factories—Non-food	106	27	8
Farms	25	12	—
Garages	35	5	4
Hospitals	10	7	3
Land, open ground	41	11	—
Offices	28	1	4
Parks, Recreation Grounds	2	2	—
Piggeries	1	1	—
Poultry runs	11	11	—
Public Buildings	16	1	4
Public Entertainment	6	1	2
Public Houses	14	1	1
Railway Embankments	8	5	—
Railway Sidings	5	4	—
Refuse Tips—Private	2	1	—
Refuse Tips—Public	6	4	—
Reservoirs	8	4	—
Schools—Private	4	—	3
Schools—Public	20	2	10
Shops—Food	445	11	28
Shops—Non-food	765	6	31
Slaughterhouses	1	1	—
Sports Grounds	5	3	—
Stables	23	7	—
Store-sheds	27	5	—
Warehouses	5	2	1
Totals	29,563	322	1,996

It will thus be seen that of the 29,563 premises inspected 1·1 per cent. were found to be rat infested and 6·8 per cent. mouse infested.

Table 6a.

Distribution of Infestation.

Ward	Premises Surveyed	Infested by Rats	Infested by Mice	No Evidence of Infestation	Per Cent.
Blackley	7,715	52	287	7,376	95·6
Crumpsall	4,820	73	219	4,528	93·9
Moston	6,701	87	336	6,278	93·7
Newton Heath ..	5,570	66	238	5,266	94·6
Harpurhey ..	4,965	44	916	4,005	80·7
Total for Northern Area	29,771	322	1,996	27,453	92·2

Table 7.

Category of Infestation at Rat-Infested Premises.

Type of Premises	Number of Premises Infested		
	Reservoir	Major Primary	Minor Secondary
Allotments, etc.	—	3	6
Air Raid Shelters	—	—	1
Bakehouses	—	—	1
Churches, Chapels	—	—	1
Dairies	—	—	1
Ditches, Brook-courses	1	2	9
Dwelling-houses	—	26	135
Factories—Food	—	—	1
Factories—Non-food	—	2	25
Farms	—	—	12
Garages	—	—	5
Hospitals	—	2	5
Land, etc.	—	2	9
Offices	—	—	1
Parks, etc.	—	—	2
Piggeries	—	—	1
Poultry Runs	—	—	11
Public Buildings	—	—	1
Public Entertainment	—	—	1
Public Houses	—	—	1
Railway banks	—	—	5
Railway sidings	—	—	4
Refuse-tips—Private	—	—	1
Refuse tips—Public	2	1	1
Schools—Public	—	1	1
Shops—Food	—	—	11
Shops—Non-food	—	—	6
Slaughterhouses	—	—	1
Stables	—	—	7
Sports Grounds	—	—	3
Store-sheds	—	—	5
Warehouses	—	1	1
Reservoirs	—	1	3
Totals	3	41	278

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Abstract of Registrar General's Health Reports, 1911 to 1946

YEAR	POPULATION	DEATH RATE			BIRTH RATE			INFANT DEATH RATE			ALL PUERPERAL CAUSES		
		Number of Deaths	Per 1000 Pop'n	England and Wales	Number of Births	Per 1000 Pop'n	England and Wales	Number of Deaths	Per 1000 Births	England and Wales	Number of Deaths	Rate per 1000 Births	England and Wales
1911	716163	12281	17·15	14·6	18595	25·96	24·4	2908	156	130	72	3·87	3·87
1912	723531	11834	16·36	13·4	18311	25·31	24·0	2251	123	94	65	3·55	3·98
1913	730982	11521	15·76	13·8	18791	25·71	24·1	2415	129	108	72	3·83	3·96
1914	731830	12473	17·04	14·0	18779	25·66	23·8	2423	129	104	79	4·21	4·17
1915	700319	12230	17·47	15·7	16696	23·84	21·8	2141	128	109	74	4·43	4·18
1916	B 742690 D 682608	11025	16·15	14·3	15597	21·00	21·9	1737	111	91	64	4·10	4·12
1917	B 735873 D 660143	10276	15·57	14·2	12937	17·58	18·1	1438	111	96	46	3·48	3·89
1918	B 746011 D 665807	12227	18·36	17·3	12926	17·33	17·6	1381	107	97	42	3·25	3·79
1919	B 771973 D 741068	10678	14·41	14·0	13686	17·73	18·5	1333	97	89	67	4·89	4·37
1920	738000	10300	13·96	12·4	19213	26·03	25·4	1882	98	79	67	3·49	4·33
1921	744000	10111	13·59	12·1	17549	23·59	22·4	1713	98	82	64	3·65	3·91
1922	748500	10653	14·23	12·8	15787	21·09	20·5	1525	97	77	59	3·74	3·31
1923	752100	10078	13·40	11·6	15388	20·46	19·7	1360	88	69	58	3·77	3·81
1924	755000	10563	13·99	12·2	14483	19·18	18·8	1454	100	75	71	4·90	3·90
1925	755800	10960	14·50	12·2	14162	18·74	18·3	1364	96	75	51	3·60	4·08
1926	752000	10077	13·40	11·6	13969	18·58	17·8	1216	87	70	68	4·87	4·12
1927	751900	10532	14·01	12·3	13036	17·34	16·7	1122	86	69	65	4·99	4·11
1928	755900	9989	13·21	11·7	12902	17·07	16·7	1179	91	65	59	4·57	4·42
1929	746500	11839	15·86	13·4	13058	17·49	16·3	1272	97	74	61	4·67	4·33
1930	757900	9791	12·92	11·4	12851	16·96	16·3	995	77	60	64	4·74	3·40
1931	772090	10645	13·79	12·3	12337	15·98	15·8	1049	85	56	40	†3·09	†3·94
1932	763000	10076	13·21	12·0	11825	15·50	15·3	1015	86	65	47	3·79	4·04
1933	758150	10345	13·65	12·3	11156	14·71	14·4	834	75	64	52	4·43	4·32
1934	754600	9530	12·63	11·8	11555	15·31	14·8	798	69	59	48	3·97	4·42
1935	748100	10120	13·53	11·7	11379	15·21	14·7	809	71	57	44	3·69	3·93
1936	744000	10207	13·72	12·1	11231	15·10	14·8	863	77	59	52	4·42	3·65
1937	736500	10216	13·87	12·4	10786	14·64	14·9	823	76	58	46	4·09	3·13
1938	732900	9243	12·61	11·6	11025	15·04	15·1	761	69	53	46	3·98	2·97
1939	B 727600 D 702500	9405	13·89	12·1	10378	14·26	15·0	634	61	50	31	2·85	2·82
1940	622300	11191	17·98	14·3	10388	16·69	14·6	729	70	55	24	2·21	2·16*
1941	601840	10016	16·64	12·9	9849	16·36	14·2	832	84	59	26	2·53	2·23*
1942	601900	8861	14·72	11·6	10276	17·07	15·8	663	65	49	25	2·33	2·01*
1943	599300	9290	15·50	12·1	11185	18·66	16·5	681	61	49	27	2·33	2·29
1944	614760	8731	14·20	11·6	12204	19·85	17·6	654	54	46	23	1·83	1·93
1945	623480	8985	14·41	11·4	11362	18·22	16·1	634	56	46	12	1·02	1·79
1946	668660	9038	13·52	11·5	13969	20·89	19·1	890	64	43	23	1·60	1·43

YEAR	PUERPERAL AND POST ABORTIVE SEPSIS			OTHER PUERPERAL CAUSES			ALL FORMS OF TUBERCULOSIS			PULMONARY TUBERCULOSIS			OTHER FORMS OF TUBERCULOSIS		
	Number of Deaths	Rate per 1000 Births	England and Wales	Number of Deaths	Rate per 1000 Births	England and Wales	Notified	Deaths	Rate per 1000 Pop'n	Notified	Deaths	Rate per 1000 Pop'n	Notified	Deaths	Rate per 1000 Pop'n
1911	28	1·50	1·43	44	2·37	2·44	—	1491	2·08	1837	1143	1·60	—	348	·49
1912	22	1·20	1·39	43	2·35	2·59	—	1524	2·11	2404	1150	1·59	—	374	·52
1913	22	1·17	1·26	50	2·56	2·70	3885	1409	1·93	2412	1002	1·48	1473	327	·45
1914	20	1·38	1·55	53	2·82	2·62	3596	1639	2·24	2604	1293	1·77	932	346	·47
1915	31	1·86	1·47	43	2·57	2·71	3050	1639	2·34	2213	1342	1·92	837	297	·42
1916	21	1·35	1·38	43	2·76	2·74	3434	1587	2·32	2549	1258	1·84	885	329	·48
1917	16	1·24	1·31	29	2·24	2·68	3129	1569	2·38	2247	1228	1·86	882	341	·52
1918	15	1·16	1·28	27	2·09	2·51	2544	1471	2·21	1846	1196	1·89	698	275	·41
1919	33	2·41	1·67	34	2·48	2·70	2025	1206	1·63	1591	986	1·33	434	220	·30
1920	45	2·34	1·31	22	1·15	2·52	2044	1101	1·49	1507	899	1·22	537	202	·27
1921	34	1·94	1·38	30	1·71	2·53	2174	1230	1·65	1644	981	1·32	530	249	·33
1922	31	1·96	1·36	28	1·77	2·43	2081	1199	1·60	1486	954	1·27	595	245	·33
1923	20	1·30	1·30	38	2·47	2·51	2228	1154	1·53	1496	936	1·24	732	218	·29
1924	31	2·14	1·39	40	2·76	2·51	2200	1137	1·51	1568	910	1·21	632	227	·30
1925	20	1·84	1·56	25	1·77	2·52	2134	1193	1·58	1511	1005	1·33	623	187	·25
1926	30	2·15	1·60	38	2·72	2·52	1810	1082	1·44	1352	911	1·21	458	171	·23
1927	27	2·07	1·57	38	2·92	2·54	1889	1060	1·41	1388	894	1·19	501	166	·22
1928	27	2·09	1·79	32	2·48	2·63	1895	998	1·32	1409	852	1·13	486	146	·19
1929	24	1·84	1·80	37	2·83	2·53	1751	1078	1·44	1373	931	1·25	378	147	·20
1930	34	2·52	1·92	30	2·22	2·48	1735	1061	1·40	1275	898	1·18	400	163	·22
1931	18	†1·39	†1·59	22	†1·70	†2·35	1781	994	1·29	1285	861	1·12	496	133	·17
1932	20	1·61	1·55	27	2·18	2·49	1489	885	1·16	1087	766	1·00	402	119	·16
1933	20	1·70	1·75	32	2·73	2·57	1394	891	1·18	1081	791	1·04	313	100	·13
1934	16	1·32	1·95	32	2·65	2·47	1386	881	1·17	1073	761	1·01	313	120	·16
1935	23	1·93	1·61	21	1·76	2·32	1313	808	1·08	1006	714	·95	307	94	·13
1936	16	1·36	1·34	36	3·06	2·31	1276	776	1·04	975	671	·90	301	105	·14
1937	13	1·16	·94	33	2·03	2·19	1431	789	1·07	1055	674	·92	376	115	·16
1938	17	1·47	·86	29	2·51	2·11	1250	726	·99	947	627	·86	303	99	·14
1939	8	·73	·74	23	2·12	2·08	1199	701	1·00	910	601	·86	289	100	·14
1940	9	·83	·52*	15	1·38	1·64*	1272	769	1·24	1012	678	1·09	260	91	·15
1941	10	·97	·48*	16	1·56	1·75*	1309	794	1·32	1036	679	1·13	273	115	·19
1942	7	·65	·42*	18	1·68	1·59*	1201	672	1·12	946	592	·99	255	80	·13
1943	12	1·04	·73	15	1·29	1·56	1249	639	1·07	957	546	·91	292	93	·16
1944	8	·64	·59	15	1·19	1·34	1157	559	·91	922	491	·80	235	68	·11
1945	3	·25	·49	9	·77	1·30	1206	577	·93	982	496	·80	224	81	·13
1946	5	·35	·31	18	1·25	1·12	1074	527	·79	885	460	·69	189	67	·10

YEAR	SMALLPOX			TYPHOID AND PARATYPHOID FEVERS			SCARLET FEVER			DIPHTHERIA			MEASLES			WHOOPING COUGH		
	Notified	Deaths	Rate per 1000 Pop'n	Notified	Deaths	Rate per 1000 Pop'n	Notified	Deaths	Rate per 1000 Pop'n	Notified	Deaths	Rate per 1000 Pop'n	Notified	Deaths	Rate per 1000 Pop'n	Notified	Deaths	Rate per 1000 Pop'n
1911	—	—	—	256	50	·07	1939	44	·06	472	89	·12	—	337	47		141	·20
1912	1	1	·001	242	46	·06	1840	50	·07	474	90	·13	—	495	·68	—	300	41
1913	1	—	—	292	48	·07	3715	93	·13	650	99	·14	—	264	·36	—	137	·19
1914	—	—	—	156	40	·05	4712	161	·22	740	103	·14	—	300	·41	—	285	·39
1915	—	—	—	174	37	·05	2922	82	·12	548	103	·15	—	453	65	—	70	·10
1916	—	—	—	78	23	·03	1185	33	·05	614	64	·09	9230	184	·27	—	304	·45
1917	—	—	—	86	10	·02	829	15	·02	581	57	·09	10613	293	·44	—	53	·08
1918	—	—	—	68	9	·01	779	21	·03	518	55	·08	8448	167	·25	5738	332	·50
1919	14	1	·001	90	19	·03	1758	26	·04	471	35	·05	8420	106	·14	1000	39	·05
1920	4	—	—	54	11	·01	3829	46	·06	914	71	·10	10635	210	·28	2290	86	·12
1921	—	—	—	90	12	·02	5419	59	·08	1045	90	·12	1135	4	·005	4415	170	·23
1922	4	—	—	38	5	·007	3682	61	·08	839	79	·11	19614	358	·48	2160	99	·13
1923	—	—	—	50	9	·01	1841	31	·04	549	47	·06	3481	84	·11	3804	186	·25
1924	—		—	106	13	·02	1799	34	·05	574	61	·08	18349	373	49	1706	112	·15
1925	—	—	—	69	10	·01	2872	59	·08	1037	99	·13	7941	128	·17	3333	211	·28
1926	2	—	—	33	10	·01	2282	25	·03	1153	102	·14	10953	162	·22	2094	63	·08
1927	36	—	—	24	3	·004	1937	20	·03	1318	91	12	13987	164	·22	2244	125	·17
1928	68	—	—	37	4	·005	2168	13	·02	1196	94	·12	7141	127	·17	3189	93	·12
1929	8	1	·001	49	6	·008	2375	9	·01	895	56	·08	9512	68	·09	4037	222	·30
1930	2	—	—	42	8	·01	3771	10	·01	1059	57	·07	10738	147	·19	1388	36	·05
1931	—	—	—	27	4	·005	2973	11	·01	735	60	·08	7771	63	·08	3150	90	·12
1932	—	—	—	47	3	·004	2319	17	·02	1069	81	·11	12238	129	·17	2280	84	·11
1933	—	—	—	15	2	·003	1804	14	·02	1019	87	·11	6350	48	·06	2230	49	·06
1934	—	—	—	16	2	·003	2151	14	·02	1276	83	·11	11383	96	·13	1565	37	·05
1935	—	—	—	25	4	·005	2849	13	·02	1302	60	·08	9907	99	13	1632	50	·07
1936	—	—	—	19	2	·003	2463	6	·008	1649	91	·12	8807	114	16	1457	52	·07
1937	—	—	—	13	1	·001	2656	7	·01	1883	89	·12	6550	44	·06	1403	54	·07
1938	—	—	—	7	—	—	2487	8	·01	1591	56	·08	9949	60	·08	1075	13	·02
1939	—	—	—	30	1	·001	1332	1	·001	1031	36	·05	574	—	—	1406	30	·04
1940	—	—	—	72	1	·002	768	1	·002	917	47	·08	14844	28	·04	670	7	·01
1941	—	—	—	69	—	—	885	2	·003	1009	46	·08	3869	20	·03	4715	65	·11
1942	—	—	—	11	2	·003	1869	1	·002	814	27	·05	10468	17	·03	1103	16	·03
1943	—	—	—	20	1	·002	1992	1	·002	791	30	·05	4419	12	·02	3277	42	·07
1944	—	—	—	4	—	—	1539	—	—	266	6	·01	6736	9	·01	2003	26	·04
1945	—	—	—	9	1	·001	1140	—	—	302	14	·02	5596	8	·01	1835	25	·04
1946	—	—	—	18	1	·001	775	—	—	259	11	·02	3800	3	·00	2265	32	·05

BRONCHITIS		PNEUMONIA—ALL FORMS			INFLUENZA		DIARRHŒA (Under 2 Years)		APPENDICITIS		CA[illegible]ER		HEART DISEASE		OTHER DISEASES OF CIRCULATORY SYSTEM		NEPHRITIS		CONGENITAL MALFORMATIONS AND DEBILITY, ETC., INCLUDING PREMATURE BIRTH		VIOLENCE Apart from Suicide		SUICIDE		YEAR
Deaths	Rate per 1000 Pop'n	Notified	Deaths	Rate per 1000 Pop'n	Deaths	Rate per 1000 Pop'n	Deaths	Rate per 1000 Pop'n	Deaths	Rate per 1000 Pop'n	Deaths	Rate per 1000 Pop'n	Deaths	Rate per 1000 Pop'n	Deaths	Rate per 1,000 Pop'n	Deaths	Rate per 1000 Pop'n	Deaths	Rate per 1000 Pop'n	Deaths	Rate per 1000 Pop'n	Deaths	Rate per 1000 Pop'n	
1074	1·50	—	1378	1·78	87	·12	1100	1·54	63	·09	772	1·06	813	1·14	—	—	345	·48	798	1·11	339	·56	66	·09	1911
1259	1·74	—	1447	2·00	109	·15	272	·38	39	·05	741	1·02	853	1·18	—		307	·42	742	1·03	383	·53	74	·10	1912
1145	1·57	—	1173	1·60	132	·18	622	·85	49	·07	725	·99	842	1·15			296	·40	741	1·01	425	·58	66	[illegible]	1913
1206	1·65	—	1321	1·81	118	·16	523	·71	53	·07	751	1·03	912	1·25			359	·49	734	1·00	457	·62	68	·09	1914
1305	1·86	—	1141	1·63	142	·20	479	·68	58	·08	784	1·12	1020	1·46			359	·51	668	·95	399	·57	44	·06	1915
1232	1·80	—	991	1·45	140	·21	305	·45	57	·08	805	1·18	872	1·28	—	—	331	·48	523	·77	424	·62	26	·04	1916
1132	1·71	—	984	1·49	105	·16	282	·43	48	·07	786	1·19	820	1·24	—	—	304	·46	478	·72	390	·59	33	·05	1917
1040	1·56	—	1500	2·25	2042	3·07	139	·21	33	·05	823	1·24	773	1·16			271	·41	470	·71	295	·44	37	·06	1918
1246	1·68	1226	1027	1·39	1088	1·47	162	·22	38	·05	868	1·17	869	1·17	—	—	262	·35	504	·65	299	·40	51	·07	1919
1177	1·59	825	1019	1·38	228	·31	237	·32	53	·07	948	1·28	902	1·22	—	—	270	·37	689	·93	[illegible]	·41	43	·06	1920
1038	1·40	1796	995	1·34	204	·27	375	·50	52	·07	953	1·28	1002	1·35	236	0·32	258	·35	581	·78	282	·38	63	[illegible]	1921
1233	1·05	2755	1149	1·54	387	·52	190	·25	49	·07	964	1·29	1006	1·34	236	0·32	282	·38	513	·69	272	·36	76	·10	1922
1061	1·41	2493	1097	1·46	279	·37	209	·28	53	·07	1058	1·41	1022	1·36	274	0·36	250	·33	440	·59	252	[illegible]	[illegible]	[illegible]	1923
1153	1·53	2650	1100	1·46	334	·44	186	·25	45	·06	1057	1·40	1066	1·41	368	0·49	260	·34	511	·68	257	·34	[illegible]	[illegible]	1924
1279	1·69	2551	1060	1·40	259	·34	213	·28	49	·06	1000	1·40	1140	1·51	471	0·62	244	·32	454	·64	255	·33	87	·12	1925
996	1·32	2189	873	1·16	213	·28	258	·34	47	·06	1122	1·49	1102	1·47	428	0·57	239	·32	446	·59	268	·36	64	·09	1926
1041	1·38	2950	1053	1·40	450	·60	181	·24	50	·07	1089	1·45	1201	1·60	[illegible]	0·81	242	[illegible]	414	[illegible]	[illegible]	·33	94	·13	1927
793	1·05	2539	928	1·23	177	·23	246	·33	56	·07	1130	1·50	1268	1·68	682	0·90	303	[illegible]	415	[illegible]	274	·36	90	·12	1928
1002	1·34	3140	1300	1·74	697	·93	240	·32	64	·09	1168	1·50	1697	2·27	528	0·71	279	·37	444	·59	[illegible]	·42	81	·11	1929
647	·85	2349	827	1·09	128	·17	166	·22	49	·06	1149	1·52	1523	2·01	476	0·63	295	·39	475	·63	317	·42	[illegible]	·44	1930
826	1·07	2485	981	1·27	337	·44	172	·22	49	·06	1259	1·62	1738	2·25	517	0·67	300	·39	442	·57	[illegible]	·39	95	·12	1931
556	·73	2368	882	1·16	184	·24	125	·16	42	·06	1287	1·69	1761	2·31	496	0·65	292	·38	439	·58	325	·43	116	[illegible]	1932
579	·76	2527	824	1·09	532	·70	102	·13	45	·06	1194	1·57	2090	2·70	502	0·66	269	[illegible]	[illegible]	·54	335	·44	100	·13	1933
422	·56	1674	687	·91	92	·12	113	·15	42	·06	1273	1·69	1905	2·52	471	0·62	282	[illegible]	417	·55	[illegible]	[illegible]	96	·13	1934
485	·65	2480	705	1·02	222	·30	74	·10	53	·07	1338	1·79	1979	2·65	373	0·50	255	·34	444	[illegible]	286	·38	99	·13	1935
534	·72	2213	781	1·05	125	·17	57	·08	40	·05	1256	1·69	2224	2·99	466	0·63	270	·36	444	[illegible]	315	·43	93	·13	1936
475	·64	2427	742	1·01	308	·42	64	·09	60	·08	1284	1·74	2315	3·14	440	0·60	261	·35	419	[illegible]	307	·42	70	[illegible]	1937
347	·47	1646	589	·80	84	·11	75	·10	38	·05	1316	1·80	2083	2·84	436	0·59	230	·31	386	[illegible]	295	·40	58	·13	1938
427	·61	1324	411	·59	160	·23	62	·09	42	·06	1265	1·80	2311	3·29	470	0·67	258	·37	357	·51	376	·54	91	·13	1939
1733	2·78	1785	551	·89	198	·32	75	·12	42	·07	1242	2·00	2023	3·25	286	0·46	274	·44	[illegible]	[illegible]	692	1·11	71	·11	1940
1034	1·72	1809	548	·91	105	·17	113	·19	23	·04	1259	2·09	1883	3·13	214	0·36	235	·39	372	·62	[illegible]	[illegible]	[illegible]	[illegible]	1941
823	1·37	1402	364	·60	51	·09	93	·15	25	·04	1256	2·09	1938	3·22	238	0·40	[illegible]	·39	379	·63	297	·49	[illegible]	[illegible]	1942
971	1·62	1374	468	·78	231	·38	88	·15	24	·04	1280	2·14	1833	3·06	289	0·48	[illegible]	·37	356	·59	292	·49	60	[illegible]	1943
791	1·29	979	357	·58	50	·08	73	·12	24	·04	1286	2·09	1950	3·17	280	0·46	226	·37	[illegible]	[illegible]	[illegible]	·46	[illegible]	·11	1944
984	1·58	857	365	·59	44	·07	85	·14	27	·04	1297	2·08	1824	2·93	307	0·49	214	·34	332	·53	[illegible]	[illegible]	74	·12	1945
893	1·34	1040	399	·60	105	·16	169	·25	20	·03	1285	1·92	1882	2·81	377	0·56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1946

B Population for calculating Birth rates.
D Population for calculating Death-rates.

* Excluding Abortion.
† From 1931 Rates for Maternal Mortality are based on Live and Still Births.